Contents

Number 1 January 2004

1 EDITORIAL BOARD, 2004

3 GUEST REVIEWERS FOR *THE ANNALS OF THORACIC SURGERY*

EDITORIAL

10 **A Gift From Anonymous**
L. Henry Edmunds, Jr, MD

ORIGINAL ARTICLES: CARDIOVASCULAR

12 **Implementing the ACGME General Competencies in a Cardiothoracic Surgery Residency Program Using 360-Degree Feedback**
Robert S. D. Higgins, MD, Jessica Bridges, BA, James M. Burke, PhD, Mary Alice O'Donnell, PhD, Neri M. Cohen, MD, PhD, and Susan B. Wilkes, PhD

18 **Routine Mechanical Ventricular Assist Following the Norwood Procedure—Improved Neurologic Outcome and Excellent Hospital Survival**
Ross M. Ungerleider, MD, Irving Shen, MD, Thomas Yeh, Jr, MD, Jess Schultz, MD, Robert Butler, MD, Michael Silberbach, MD, Carmen Giacomuzzi, CCP, Eileen Heller, CCP, Leanne Studenberg, BSN, Brian Mejak, CCP, Jamie You, CP, Debbie Farrel, RN, Scott McClure, RT, and Erle H. Austin, MD

23 **Management of Univentricular Heart With Systemic Ventricular Outflow Obstruction by Pulmonary Artery Banding and Damus-Kaye-Stansel Operation**
Takuya Miura, MD, Hidefumi Kishimoto, MD, Hiroaki Kawata, MD, Masatoshi Hata, MD, Takaya Hoashi, MD, and Tohru Nakajima, MD

29 **Successful Early Surgical Recruitment of the Congenitally Disconnected Pulmonary Artery**
David N. Murphy, MBBS, David S. Winlaw, MBBS, MD, Steve G. Cooper, MB ChB, and Graham R. Nunn, MBBS

36 **The Fibrous Matrix of Ventricular Myocardium in Hypoplastic Left Heart Syndrome: A Quantitative and Qualitative Analysis**
Caner Salih, MB ChB, Karen P. McCarthy, BS, and Siew Yen Ho, PhD

41 **Results of Arterial Switch Operation for Primary Total Correction of the Taussig-Bing Anomaly**
Jutta Wetter, MD, Nicodème Sinzobahamvya, MD, Hedwig C. Blaschczok, MD, Mi-Young Cho, MD, Anne Marie Brecher, MD, Lutz M. Grävinghoff, MD, PhD, and Andreas E. Urban, MD

Invited Commentary
Juan V. Comas, MD, PhD

48 **High Systemic Vascular Resistance and Sudden Cardiovascular Collapse in Recovering Norwood Patients**
Gail E. Wright, MD, Dennis C. Crowley, MD, John R. Charpie, MD, PhD, Richard G. Ohye, MD, Edward L. Bove, MD, and Thomas J. Kulik, MD

53 **Echocardiographic Analysis of Ventricular Geometry and Function During Repair of Congenital Septal Defects**
Joseph P. Hart, MD, Santos E. Cabreriza, BA, Rowan F. Walsh, MD, Beth F. Printz, MD, PhD, Brianne F. Blumenthal, BA, David K. Park, BS, April J. Zhu, BS, Cecily G. Gallup, BA, Alan D. Weinberg, MS, Daphne T. Hsu, MD, Ralph S. Mosca, MD, Jan M. Quaegebeur, MD, and Henry M. Spotnitz, MD

61 **Predictors of Mortality at Initiation of Peritoneal Dialysis in Children After Cardiac Surgery**
Harald Boigner, MD, Werner Brannath, PhD, Michael Hermon, MD, Elisabeth Stoll, MD, Gudrun Burda, MD, Gerhard Trittenwein, MD, and Johann Golej, MD

66 **Early Postoperative Body Temperature and Developmental Outcome After Open Heart Surgery in Infants**
Serena M. Cottrell, MRCPCH, Kevin P. Morris, MD, Paul Davies, PhD, David C. Bellinger, PhD, Richard A. Jonas, MD, and Jane W. Newburger, MD

Invited Commentary
Gil Wernovsky, MD, FAAP

72 **Cerebral Autoregulation After Hypothermic Circulatory Arrest in Operations on the Aortic Arch**
Eugenio Neri, MD, Carlo Sassi, MD, Lucio Barabesi, DrPh, Massimo Massetti, MD, Giorgio Pula, MD, Dimitrios Buklas, MD, Rossana Tassi, MD, and Pierpaolo Giomarelli, MD

Invited Commentary
Scott A. LeMaire, MD

81 **Stent-Graft Repair of Penetrating Atherosclerotic Ulcers in the Descending Thoracic Aorta: Mid-Term Results**
Philippe Demers, MD, MS, D. Craig Miller, MD, R. Scott Mitchell, MD, Stephen T. Kee, MD, Lynn Chagonjian, RN, and Michael D. Dake, MD

87 **Cox/Maze III Operation Versus Radiofrequency Ablation for the Surgical Treatment of Atrial Fibrillation: A Comparative Study**
Bruno Chiappini, MD, Sofia Martìn-Suàrez, MD, Antonino LoForte, MD, Giorgio Arpesella, MD, Roberto Di Bartolomeo, MD, and Giuseppe Marinelli, MD

93 **Patencies of 2,127 Arterial to Coronary Conduits Over 15 Years**
James Tatoulis, Brian F. Buxton, and John A. Fuller

102 **Reduced Strokes in the Elderly: The Benefits of Untouched Aorta Off-Pump Coronary Surgery**
Oren Lev-Ran, MD, Dan Loberman, Menachem Matsa, MD, Dmitri Pevni, MD, Nahum Nesher, MD, Rephael Mohr, MD, and Gideon Uretzky, MD

108 **Effect of Moderate Pressure Distention on the Human Saphenous Vein Vasomotor Function**
Elena B. Okon, PhD, Michael J. Millar, BS, Christine M. Crowley, PhD, Jamil G. Bashir, MD, Richard C. Cook, MD, York N. Hsiang, MD, Bruce McManus, MD, PhD, and Cornelis van Breemen, PhD

Invited Commentary
Franklin Rosenfeldt, MD, FRACS

116 **Duplex Ultrasonography Predicts Safety of Radial Artery Harvest in the Presence of an Abnormal Allen Test**
Yasir Abu-Omar, MRCS, Shafi Mussa, MA, MRCS, Kyriakos Anastasiadis, MD, Sarah Steel, BS(Hons), Linda Hands, MS, FRCS, and David P. Taggart, MD, PhD, FRCS

120 **Skeletonization Versus Pedicle Preparation of the Radial Artery With and Without the Ultrasonic Scalpel**
Andreas Rukosujew, MD, Rudolf Reichelt, PhD, Alexander M. Fabricius, MD, Gabriele Drees, MD, Tonny D. T. Tjan, MD, Markus Rothenburger, MD, Andreas Hoffmeier, MD, Hans H. Scheld, MD, and Christof Schmid, MD

126 **Nitric Oxide and Prostacyclin in Ultrasonic Vasodilatation of the Canine Internal Mammary Artery**
Ayako Maruo, MD, Chad E. Hamner, MD, Alfredo J. Rodrigues, MD, PhD, Tetsuya Higami, MD, PhD, James F. Greenleaf, PhD, and Hartzell V. Schaff, MD

133 **Clinical Experience With an Implantable, Intracardiac, Continuous Flow Circulatory Support Device: Physiologic Implications and Their Relationship to Patient Selection**
O. H. Frazier, MD, Timothy J. Myers, BS, Stephen Westaby, MS, PhD, FETCS, and Igor D. Gregoric, MD

143 **Left Ventricular Pressure and Volume Unloading During Pulsatile Versus Nonpulsatile Left Ventricular Assist Device Support**
Stefan Klotz, MD, Mario C. Deng, MD, Joerg Stypmann, MD, Juergen Roetker, MD, Markus J. Wilhelm, MD, Dieter Hammel, MD, Hans H. Scheld, MD, and Christof Schmid, MD

Invited Commentary
Kevin Lachapelle, MD

151 **Five-Year Results of 219 Consecutive Patients Treated With Extracorporeal Membrane Oxygenation for Refractory Postoperative Cardiogenic Shock**
Nicolas Doll, MD, Bob Kiaii, MD, Michael Borger, MD, PhD, Jan Bucerius, MD, Klaus Krämer, Dierk V. Schmitt, MD, Thomas Walther, MD, PhD, and Friedrich W. Mohr, MD, PhD

Invited Commentary
Nicholas Smedira, MD

158 **Hemodynamic Unloading of the Failing Left Ventricle Using an Arterial-to-Arterial Extracorporeal Flow Circuit**
Benjamin E. Haithcock, MD, Hideaki Morita, MD, Nervin H. Fanous, MD, George Suzuki, MD, and Hani N. Sabbah, PhD

164 **Plasma Brain Natriuretic Peptide Reflects Left Ventricular Function During Percutaneous Cardiopulmonary Support**
Toshihiro Ohata, MD, Tetsuo Sakakibara, MD, Hiroshi Takano, MD, and Hironori Izutani, MD

168 **Surgery for Aortic Root Aneurysm in Children: A 21-Year Experience in 50 Patients**
Stephen M. Cattaneo, MD, Brian T. Bethea, MD, Diane E. Alejo, BA, Philip J. Spevak, MD, Sarah B. Clauss, MD, Harry C. Dietz, MD, Vincent L. Gott, MD, and Duke E. Cameron, MD

177 **The Congenitally Bicuspid Aortic Valve: How Does It Function? Why Does It Fail?**
Francis Robicsek, MD, PhD, Mano J. Thubrikar, PhD, Joseph W. Cook, MD, and Brett Fowler, RT

186 **Viability and Histologic Structure of Porcine Valves After Cryopreservation**
M. Esther Rendal Vázquez, PhD, T. Díaz Román, MD, M. González Cuesta, MD, C. Zavanella Botta, MD, J. Sánchez Ibáñez, MD, S. Pértega Díaz, PhD, and C. Andión Nuñez, MD

191 **Hemolysis After Mitral Valve Repair: Mechanisms and Treatment**
Buu-Khanh Lam, MD, Delos M. Cosgrove III, MD, Sunil K. Bhudia, MD, and A. Marc Gillinov, MD

196 **Preclinical Assessment of a Trileaflet Mechanical Valve in the Mitral Position in a Calf Model**
Igor Gregoric, MD, Jeff L. Conger, BS, Helmut Reul, DSc, Daniel Tamez, BS, Fred J. Clubb, Jr, DVM, PhD, Raymond F. Stainback, MD, Antonieta Hernandez, MD, Roberto Cervera, MD, Kazuhiro Eya, MD, Denise Byler, Natalie K. Bruno, Kamuran A. Kadipasaoglu, PhD, and O. H. Frazier, MD

203 **Biomechanical Comparison of Median Sternotomy Closures**
Julian E. Losanoff, MD, Andrea D. Collier, BS, Colette C. Wagner-Mann, DVM, PhD, Bruce W. Richman, MA, Harold Huff, MS, Fu-hung Hsieh, PhD, Alberto Diaz-Arias, MD, and James W. Jones, MD, PhD

210 **A Modified Parasternal Wire Technique for Prevention and Treatment of Sternal Dehiscence**
Rajeev Sharma, MCh, Deepak Puri, MCh, Bishnu P. Panigrahi, MD, and Inderjeet S. Virdi, FRCS

214 **Markers for Endothelial Activation During Open Heart Surgery**
Hilde Eikemo, MS, Olav F. M. Sellevold, MD, PhD, and Vibeke Videm, MD, PhD

220 **Sonoclot Analysis in Cardiac Surgery in Dialysis-Dependent Patients**
Toshihiko Shibata, MD, PhD, Yasuyuki Sasaki, MD, PhD, Koji Hattori, MD, PhD, Hidekazu Hirai, MD, Mitsuharu Hosono, MD, PhD, Hiromichi Fujii, MD, PhD, and Shigefumi Suehiro, MD, PhD

226 **Diazoxide Provides Protection to Human Myocardium In Vitro That Is Concentration Dependent**
Marek A. Deja, MD, Krzysztof S. Golba, MD, PhD, Maciej Kolowca, MD, Kazimierz Widenka, MD, Jolanta Biernat, MD, and Stanislaw Wos, MD, PhD

233 **Atrial Natriuretic Peptide Protects Against Ischemia-Reperfusion Injury in the Isolated Rat Heart**
Kenji Sangawa, MD, Koji Nakanishi, MD, Kozo Ishino, MD, Masahiro Inoue, MD, Masaaki Kawada, MD, and Shunji Sano, MD

238 **Effects of Sildenafil Analogue UK 343-664 on a Porcine Model of Acute Pulmonary Hypertension**
Mark R. Bonnell, MD, Felipe Urdaneta, MD, David S. Kirby, BA, Natalie R. Valdez, MD, Thomas M. Beaver, MD, and Emilio B. Lobato, MD

243 **An Experimental Study of Surgical Ultrasonic Angioplasty: Its Effect on Atherosclerosis and Normal Arteries**
Masahide Chikada, MD

ORIGINAL ARTICLES: GENERAL THORACIC

247 **The Prognostic Role of C-Kit Protein Expression in Resected Large Cell Neuroendocrine Carcinoma of the Lung**
Christian Casali, MD, Alessandro Stefani, MD, Giulio Rossi, MD, Mario Migaldi, MD, PhD, Stefania Bettelli, BDSc, Alessia Parise, MD, and Uliano Morandi, MD

Invited Commentary
James S. Allan, MD

254 **Positron Emission Tomography Scanning Poorly Predicts Response to Preoperative Chemotherapy in Non-Small Cell Lung Cancer**
Jeffrey L. Port, MD, Michael S. Kent, MD, Robert J. Korst, MD, Roger Keresztes, MD, Matthew A. Levin, BS, and Nasser K. Altorki, MD

Invited Commentary
Paul Van Schil, MD

260 **Respiratory Function Changes After Chemotherapy: An Additional Risk for Postoperative Respiratory Complications?**
Francesco Leo, MD, Piergiorgio Solli, MD, Lorenzo Spaggiari, MD, PhD, Giulia Veronesi, MD, Filippo de Braud, MD, Maria Elena Leon, MPH, ScD, and Ugo Pastorino, MD

Invited Commentary
Richard F. Heitmiller, MD

266 **Stair Climbing Test as a Predictor of Cardiopulmonary Complications After Pulmonary Lobectomy in the Elderly**
Alessandro Brunelli, MD, Marco Monteverde, MD, Majed Al Refai, MD, and Aroldo Fianchini, MD

271 **Pulmonary Resection in Octogenarians With Stage I Nonsmall Cell Lung Cancer: A 22-Year Experience**
Malcolm V. Brock, MD, Min P. Kim, BA, Craig M. Hooker, MPh, Anthony J. Alberg, PhD, Margaret M. Jordan, RN, Carmen M. Roig, RN, Li Xu, BS, and Stephen C. Yang, MD

278 **Selective Lobar Collapse for Video-Assisted Thoracic Surgery**
Alan D. L. Sihoe, MB, BChir, Kin Ming Ho, Tak Suen Sze, Tak Wai Lee, and Anthony P. C. Yim, MD

Invited Commentary
Stephen R. Hazelrigg, MD

284 **Intermittent Infusion of 0.25% Bupivacaine Through an Intrapleural Catheter for Post-Thoracotomy Pain Relief**
Ömer Tetik, MD, Fatih İslamoğlu, MD, Erhan Ayan, MD, Mehmet Duran, MD, Suat Buket, MD, and Ahmet Çekirdekçi, MD

289 **The Nuss Procedure for Pectus Excavatum: Evolution of Techniques and Early Results on 322 Patients**
Hyung Joo Park, MD, Seock Yeol Lee, MD, Cheol Sae Lee, MD, Wook Youm, MD, and Kihl Roh Lee, MD

296 **The Use of a Lateral Stabilizer Increases the Incidence of Wound Trouble Following the Nuss Procedure**
Atsushi Watanabe, MD, Toshiaki Watanabe, MD, Takuro Obama, MD, Hisayoshi Ohsawa, MD, Tooru Mawatari, MD, Yasunori Ichimiya, MD, and Tomio Abe, MD

301 **Use of Monogen for Pediatric Postoperative Chylothorax**
Barbara E. Cormack, NZRD, Nigel J. Wilson, FRACP, Kirsten Finucane, FRACS, and Teena M. West, MS

306 **Descending Necrotizing Mediastinitis: A Minimally Invasive Approach Using Video-Assisted Thoracoscopic Surgery**
Ho-Ki Min, MD, Yong Soo Choi, MD, Young Mog Shim, MD, Young Ick Sohn, MD, and Jhingook Kim, MD

CASE REPORTS

311 **Transfemoral Control of Ruptured Aortic Pseudoaneurysm at Aortic Root Reoperation**
Gosta Pettersson, MD, Marcos Nores, MD, and A. Marc Gillinov, MD

312 **Thrombosis of Aortic Valve Homograft Associated With Lupus Anticoagulant Antibodies**
Philippe Unger, MD, PhD, Danièle Plein, MD, Olivier Pradier, MD, and Jean-Louis LeClerc, MD

314 **Left Main Stem Patch Plasty and Aortic Root Homograft in Takayasu's Disease**
Marco L. S. Matteucci, MD, Maria Iascone, BS, Amando Gamba, MD, Erica Daina, MD, Giuseppe Rescigno, MD, Michele Senni, MD, and Paolo Ferrazzi, MD

317 **Iatrogenic Iliac Artery Rupture and Type A Dissection After Endovascular Repair of Type B Aortic Dissection**
Thomas Modine, MD, Christophe Lions, MD, Laurence Destrieux-Garnier, MD, Stephan Haulon, MD, PhD, Christophe Decoene, MD, Jean-Paul Beregi, MD, PhD, and Mohamed Koussa, MD

319 **Composite Aortoplasty for Recurrent Coarctation After Neonatal Repair in Williams Syndrome**
Jeni L. Marks, MD, Max B. Mitchell, MD, David N. Campbell, MD, and Warren H. Toews, MD

321 **Coronary Artery Obstruction Due to Membranous Ridge of the Right Sinus Valsalva Associated With Tetralogy of Fallot: Syncope Mimics Anoxic Spell**
Isao Shiraishi, MD, Masaaki Yamagishi, MD, Kentaro Toiyama, MD, Yu Osawa, MD, Masao Nakagawa, MD, Akiyuki Takahashi, MD, Keisuke Shuntoh, MD, and Kenji Hamaoka, MD

323 **Hemothorax Due to Extramedullary Erythropoietic Masses**
Stergios Tassiopoulos, MD, Kostas Konstantopoulos, MD, Yannis Rombos, MD, and Athanassios Aessopos, MD

324 **Empyema Resulting From a True Colopleural Fistula Complicating a Perforated Sigmoid Diverticulum**
Kostas Papagiannopoulos, MMED, Dimitrios Gialvalis, MD, Ibrahim Dodo, MRCS, and Mike J. Darby

326 **Closure of Bronchopleural Fistulas Using Albumin-Glutaraldehyde Tissue Adhesive**
Jules Lin, MD, and Mark D. Iannettoni, MD

328 **Closure of an Iatrogenic Tracheo-Esophageal Fistula With Bronchoscopic Gluing in a Mechanically Ventilated Adult Patient**
Ermanno Scappaticci, MD, Francesco Ardissone, MD, Sergio Baldi, MD, Francesco Coni, MD, Flavio Revello, MD, Pier Luigi Filosso, MD, and Enrico Ruffini, MD

329 **Solitary Eosinophilic Granuloma of Sternum**
Atilla Eroglu, MD, Ibrahim Can Kürkçüoglu, MD, and Nurettin Karaoglanoglu, MD

331 **Primary Chondromatous Osteosarcoma of the Pulmonary Artery**
Yoshio Tsunezuka, MD, PhD, Makoto Oda, MD, PhD, Masao Takahashi, MD, PhD, Hiroshi Minato, MD, PhD, and Go Watanabe, MD, PhD

334 **Surgical Management of Leiomyosarcoma of the Mediastinum**
William C. Conner, MD, Gregory W. Fink, MD, Karen M. McGinnis, MD, and George M. Alfieris, MD

336 **Life-Threatening Hemoptysis in a Child: The Only Symptom**
Alper Toker, MD, Serhan Tanju, MD, Yusuf Bayrak, MD, Emre Cenesiz, MD, Nermin Guler, MD, Sukru Dilege, MD, and Goksel Kalayci, MD

338 **Application of ET-Kyoto Solution in Clinical Lung Transplantation**
Mitsugu Omasa, MD, Seiki Hasegawa, MD, PhD, Toru Bando, MD, PhD, Nobuharu Hanaoka, MD, Takashi Yoshimura, MD, PhD, Takayuki Nakamura, MD, PhD, and Hiromi Wada, MD, PhD

IMAGES IN CARDIOTHORACIC SURGERY

340 **Traumatic Intrapericardial Herniation of the Stomach**
Evaristo Castedo, MD, Andres Varela, MD, Ana Villasclaras, MD, Concha Gonzalez, MD, and Felix Arrieta, MD

341 **Pulmonary Tumor Embolism Secondary to Osteosarcoma**
Poo-Sing Wong, FRCS (CTh), Winn M. M. Aye, AFRCSI, and Chuen-Neng Lee, FRACS

HOW TO DO IT

342 **Double-Patch Technique for Postinfarction Ventricular Septal Perforation**
Noriyuki Tabuchi, MD, Hiroyuki Tanaka, MD, Hirokuni Arai, MD, Tomohiro Mizuno, MD, Hideki Nakahara, MD, Nagahisa Oshima, MD, Masaaki Toyama, MD, and Makoto Sunamori, MD

344 **Visualization of Intramuscular Left Anterior Descending Coronary Arteries During Off-Pump Bypass Surgery**
Senri Miwa, MD, PhD, Takeshi Nishina, MD, Koji Ueyama, MD, Takayuki Kameyama, MD, Tadashi Ikeda, MD, PhD, Kazunobu Nishimura, MD, PhD, and Masashi Komeda, MD, PhD

347 **Implantation of MicroMed DeBakey VAD Through Left Thoracotomy After Previous Median Sternotomy Operations**
Roland Hetzer, MD, PhD, Evgenij V. Potapov, MD, Yuguo Weng, MD, PhD, Henryk Sinawski, MD, Friedrich Knollmann, MD, PhD, Takeshi Komoda, MD, Ewald Hennig, PhD, and Miralem Pasic, MD, PhD

351 **Protection of Right Pneumonectomy Bronchial Sutures With a Pedicled Thymus Flap**
Maurizio V. Infante, MD, Marco Alloisio, MD, Luca Balzarini, MD, Umberto Cariboni, MD, Alberto Testori, MD, Matteo A. Incarbone, MD, Paolo Macri, MD, and Gianluigi Ravasi, MD

REVIEWS

354 **Drug Immunosuppression Therapy for Adult Heart Transplantation. Part 1: Immune Response to Allograft and Mechanism of Action of Immunosuppressants**
Xavier M. Mueller, MD

363 **Drug Immunosuppression Therapy for Adult Heart Transplantation. Part 2: Clinical Applications and Results**
Xavier M. Mueller, MD

OUR SURGICAL HERITAGE

372 **Changing Dogmas: History of Development in Treatment Modalities of Traumatic Pneumothorax, Hemothorax, and Posttraumatic Empyema Thoracis**
Thomas F. Molnar, MD, PhD, Jochen Hasse, MD, Dsci, Kumarasingham Jeyasingham, ChM, FRCS, and Major Szilard Rendeki, MD

CORRESPONDENCE

379 **Use of Internal Mammary Artery Graft in Dialysis Patients With Upper Extremity Arteriovenous Fistula**
Pramod Bonde, MS, FRCS, and Gianfranco Campalani, DMS

Reply
Hiroshi Kato, MD, and Seiichiro Ikawa, MD

379 **Off-Pump Coronary Artery Bypass Grafting Using Arterial Grafts Exclusively: Aiming for an Absolute "No-Touch" Aortic Technique**
Olivier Chavanon, MD, Mohamed Abdennadher, MD, and Dominique Blin, MD

Reply
Rinaldo Bellomo, MD, Michael Haase, MD, Anamika Sharma, BMedSci, Anja Fielitz, BPharm, Shigehiko Uchino, MD, Jens Rocktaeschel, MD, Laurie Doolan, MD, George Matalanis, FRACS, Alexander Rosalion, FRACS, Brian F. Buxton, FRACS, and Jai S. Raman, FRACS

381 **Maze Procedure**
Norbert M. van Hemel, MD, and Jo A. M. T. Defauw, MD

Reply
A. Marc Gillinov, MD, Eugene H. Blackstone, MD, and Patrick M. McCarthy, MD

382 **Oncosis Rather Than Apoptosis?**
Friedhelm Sayk, MD Claus Bartels, MD

Reply
Joachim P. Schmitt, MD, and Hermann Aebert, MD

CORRECTION

383 **Navia JL, McCarthy PM, Hoercher KJ, Smedira NG, Banbury MK, Blackstone EH. Do left ventricular assist device (LVAD) bridge-to-transplantation outcomes predict the results of permanent LVAD implantation? Ann Thorac Surg 2002;74:2051–63.**

REVIEW OF RECENT BOOKS

167 **Thoracic Surgical Oncology: Exposures and Techniques**
John C. Kucharczuk, MD

ANNOUNCEMENTS

A-56 **Information for Authors**

A-61 **Guidelines for Reviewers**

A-63 **Conditions for Publication Form**

A-65 **Events of Interest**

35 **Internet Discussion Forum**

65 **Requirements for Recertification/ Maintenance of Certification in 2004**

92 **Notice From the American Board of Thoracic Surgery Regarding Trainees and Candidates for Certification Who Are Called to Military Service Related to the War on Terrorism**

125 **Notice From the American Board of Thoracic Surgery**

142 **The Society of Thoracic Surgeons: Fortieth Annual Meeting**

195 **Southern Thoracic Surgical Association: Fifty-First Annual Meeting**

384 **The Thoracic Surgery Foundation for Research and Education**

A-69 **Southern Thoracic Surgical Association Rules for Submission of Abstracts**

A-70 **Classified Advertisements**

A-79 **Index to Advertisers**

Number 2 February 2004

ORIGINAL ARTICLES: GENERAL THORACIC

385 **Thoracoscopy-Assisted Heller Myotomy for the Treatment of Achalasia: Results of a Minimally Invasive Technique**
Kenneth A. Kesler, MD, Stacey E. Tarvin, MS, Jo Ann Brooks, DNS, Karen M. Rieger, MD, Glen A. Lehman, MD, and John W. Brown, MD

393 **Barrett's Esophagus: The Role of Laparoscopic Fundoplication**
Abbas E. Abbas, MD, Claude Deschamps, MD, Stephen D. Cassivi, MD, Mark S. Allen, MD, Francis C. Nichols III, MD, Daniel L. Miller, MD, and Peter C. Pairolero, MD

397 **Closure of Large Intrathoracic Airway Defects Using Extrathoracic Muscle Flaps**
Antoine J. H. Meyer, MD, Thorsten Krueger, MD, Domenico Lepori, MD, Michael Dusmet, MD, John-David Aubert, MD, Philippe Pasche, MD, and Hans-Beat Ris, MD

Invited Commentary
John Odell, MD

406 **Management of Postintubation Membranous Tracheal Rupture**
Paolo Carbognani, MD, PhD, Antonio Bobbio, MD, Leonardo Cattelani, MD, Eveline Internullo, MD, Domenico Caporale, MD, and Michele Rusca, MD

410 **Thoracoscopic Sympathectomy for Hyperhidrosis: Indications and Results**
Neelan Doolabh, MD, Shannon Horswell, Mary Williams, ANP, Lynne Huber, RNFA, Syma Prince, RN, BSN, Dan M. Meyer, MD, and Michael J. Mack, MD

415 **Optimal Distance of Malignant Negative Margin in Excision of Nonsmall Cell Lung Cancer: A Multicenter Prospective Study**
Noriyoshi Sawabata, MD, Mitsunori Ohta, MD, Akihide Matsumura, MD, Katsuhiro Nakagawa, MD, Hiroshi Hirano, MD, Hajime Maeda, MD, and Hikaru Matsuda, MD, PhD, for the Thoracic Surgery Study Group of Osaka University

421 **Nonanatomic Prognostic Factors in Resected Nonsmall Cell Lung Carcinoma: The Importance of Perineural Invasion as a New Prognostic Marker**
Adnan Sayar, MD, Akif Turna, MD, PhD, FETCS, Okan Solak, MD, Ali Kılıçgün, MD, Nur Ürer, MD, and Atilla Gürses, MD

426 **Radioisotope Lymph Node Mapping in Nonsmall Cell Lung Cancer: Can It Be Applicable for Sentinel Node Biopsy?**
Kazuhiro Ueda, MD, Kazuyoshi Suga, MD, Yoshikazu Kaneda, MD, Hisashi Sakano, MD, Toshiki Tanaka, MD, Masatarou Hayashi, MD, Tao-Sheng Li, MD, and Kimikazu Hamano, MD

431 **Surgical Resection of Lung Metastases From Epithelial Tumors**
Alexandre Monteiro, MD, Nuria Arce, MD, João Bernardo, MD, Luís Eugénio, MD, and Manuel J. Antunes, MD, PhD

438 **How Long Can We Preserve the Pulmonary Graft Inside the Nonheart-Beating Donor?**
Filip R. Rega, MD, Arne P. Neyrinck, MD, Geert M. Verleden, MD, PhD, Toni E. Lerut, MD, PhD, and Dirk E. M. Van Raemdonck, MD, PhD

445 **Lateral Thoracic Expansion for Jeune Syndrome: Evidence of Rib Healing and New Bone Formation**
J. Terrance Davis, MD, Frederick R. Long, MD, Brent H. Adler, MD, Robert G. Castile, MD, and Samuel Weinstein, MD

449 **A New Animal Model for Pulmonary Hypertension Based on the Overexpression of a Single Gene, Angiopoietin-1**
Danny Chu, MD, Christopher C. Sullivan, MS, Lingling Du, MD, Augustine J. Cho, BA, Masakuni Kido, MD, Paul L. Wolf, MD, Matthew D. Weitzman, PhD, Stuart W. Jamieson, MB, FRCS, and Patricia A. Thistlethwaite, MD, PhD

Invited Commentary
Vibeke Videm, MD, PhD

458 **Induction of Pulmonary Angiogenesis by Adenoviral-Mediated Gene Transfer of Vascular Endothelial Growth Factor**
Virginie Lambert, MD, René Michel, MD, CM, Guy-Michel Mazmanian, MD, Elisabeth M. Dulmet, MD, André Capderou, MD, PhD, Philippe Hervé, MD, Claude Planché, MD, and Alain Serraf, MD, PhD

Invited Commentary
Ingeborg Friehs, MD, and Pedro J. del Nido, MD

ORIGINAL ARTICLES: CARDIOVASCULAR

464 **Late Results of Palliative Atrial Switch for Transposition, Ventricular Septal Defect, and Pulmonary Vascular Obstructive Disease**
Harold M. Burkhart, MD, Joseph A. Dearani, MD, William G. Williams, MD, Francisco J. Puga, MD, Douglas D. Mair, MD, David A. Ashburn, MD, Gary D. Webb, MD, and Gordon K. Danielson, MD

470 **A New Procedure for Ebstein's Anomaly**
Qingyu Wu, MD, and Zhixiong Huang, MD

Invited Commentary
Roger B. B. Mee, MB, ChB, FRACS

477 **Effect of a Selection and Postoperative Care Protocol on Survival of Infants With Hypoplastic Left Heart Syndrome**
Paul A. Checchia, MD, FAAP, Ranae Larsen, MD, Ruchir Sehra, MD, Noha Daher, PhD, Steven R. Gundry, MD, FAAP, Anees J. Razzouk, MD, and Leonard L. Bailey, MD

Invited Commentary
John Lamberti, MD

484 **Surgical Management of Aortopulmonary Window and Associated Lesions**
Eldad Erez, MD, Ovadia Dagan, MD, Georgios P. Georghiou, MD, Oscar Gelber, MD, Bernardo A. Vidne, MD, and Einat Birk, MD

488 **Opposite Trends in Coronary Artery and Valve Surgery in a Large Multisurgeon Practice, 1979–1999**
William F. Northrup III, MD, Robert W. Emery, MD, Demetre M. Nicoloff, MD, Theodore J. Lillehei, MD, Arlen R. Holter, MD, and David P. Blake, MD

496 **Methylene Blue Reduces Mortality and Morbidity in Vasoplegic Patients After Cardiac Surgery**
Ricardo L. Levin, MD, Marcela A. Degrange, MD, Gustavo F. Bruno, MD, Carlos D. Del Mazo, MD, Daniel J. Taborda, MD, Jorge J. Griotti, MD, and Fernando J. Boullon, MD

500 **Clinical Outcome After Cardiac Operations in Patients With Cirrhosis**
Nobuhiko Hayashida, MD, Takahiro Shoujima, MD, Hideki Teshima, MD, Yoshinori Yokokura, MD, Kazuyoshi Takagi, MD, Hiroshi Tomoeda, MD, and Shigeaki Aoyagi, MD

506 **Application of Biological Glue in Repair of Intracardiac Structural Defects**
Daniel Fink, MD, James J. Klein, MD, Hyun Kang, MD, and M. Arisan Ergin, MD PhD

512 **Long-Term Results of Irrigated Radiofrequency Modified Maze Procedure in 200 Patients With Concomitant Cardiac Surgery: Six Years Experience**
Hauw T. Sie, Willem P. Beukema, Arif Elvan, and Anand R. Ramdat Misier

518 **Semirigid Partial Annuloplasty Band Allows Dynamic Mitral Annular Motion and Minimizes Valvular Gradients: An Echocardiographic Study**
Ram Sharony, MD, Paul C. Saunders, MD, Ambika Nayar, MD, Eileen McAleer, MD, Aubrey C. Galloway, MD, Julie Delianides, MA, Charles F. Schwartz, MD, Robert M. Applebaum, MD, Itzhak Kronzon, MD, Stephen B. Colvin, MD, and Eugene A. Grossi, MD

Invited Commentary
Joseph H. Gorman III, MD, and Robert C. Gorman, MD

523 **Usefulness of a Multidetector-Row Computed Tomography Scanner for Detecting Pannus Formation**
Hideki Teshima, MD, Nobuhiko Hayashida, MD, Shuji Fukunaga, MD, Eiki Tayama, MD, Takemi Kawara, MD, Shigeaki Aoyagi, MD, and Masafumi Uchida, MD

527 **Midterm Evaluation of the Sorin Bicarbon Heart Valve Prosthesis: Single-Center Experience**
Nicola Vitale, MD, PhD, Giangiuseppe Cappabianca, MD, Giuseppe Visicchio, MD, Corrado Fondacone, MD, Vito Paradiso, MD, Giuseppe Mannatrizio, MD, and Luigi de Luca Tupputi Schinosa, MD

532 **Fibrillin and Other Matrix Proteins in Mitral Valve Prolapse Syndrome**
Joseph F. Nasuti, MD, Paul J. Zhang, MD, Michael D. Feldman, MD, PhD, Terri Pasha, BS, Jasvir S. Khurana, MD, Joseph H. Gorman III, MD, Robert C. Gorman, MD, Jagat Narula, MD, PhD, and Navneet Narula, MD

537 **Role of Oral Bacterial Flora in Calcific Aortic Stenosis: An Animal Model**
David J. Cohen, MD, David Malave, MD, John J. Ghidoni, MD, Panagiotis Iakovidis, MD, Mona M. Everett, PhD, Shenghong You, MD, Youhong Liu, MD, and Barbara D. Boyan, PhD

544 **The Effect of Regional Ischemia on Mitral Valve Annular Saddle Shape**
Joseph H. Gorman III, MD, Benjamin M. Jackson, MD, Yoshiharu Enomoto, MD, and Robert C. Gorman, MD

549 **Comparison of Short-Term Mortality Risk Factors for Valve Replacement Versus Coronary Artery Bypass Graft Surgery**
Sheila C. Gardner, MS, Gary K. Grunwald, PhD, John S. Rumsfeld, MD, PhD, Joseph C. Cleveland, Jr, MD, Lynn M. Schooley, MA, Dexiang Gao, PhD, Frederick L. Grover, MD, Gerald O. McDonald, MD, and A. Laurie Shroyer, PhD

557 **Health Status and Social Risk Correlates of Extended Length of Stay Following Coronary Artery Bypass Surgery**
Gilbert Johnston, MD, J. Richard Goss, MD, MPH, Judith A. Malmgren, PhD, and John A. Spertus, MD, MPH

563 **Initial Experience With Sutureless Proximal Anastomoses Performed With a Mechanical Connector Leading to Clampless Off-Pump Coronary Artery Bypass Surgery**
Kushagra Katariya, MD, Said Yassin, MD, Hassan Y. Tehrani, MD, Pierluca Lombardi, MD, Saqib Masroor, MD, and Tomas A. Salerno, MD

569 **Off-Pump Versus On-Pump Myocardial Revascularization in Low-Risk Patients With One or Two Vessel Disease: Perioperative Results in a Multicenter Randomized Controlled Trial**
Luís Roberto Gerola, MD, Enio Buffolo, MD, Waldir Jasbik, MD, Bruno Botelho, MD, João Bosco, MD, Luís A. Brasil, MD, and João Nelson R. Branco, MD

574 **High Risk Coronary Artery Bypass Patient: Incidence, Surgical Strategies, and Results**
Mario Gaudino, MD, Franco Glieca, MD, Francesco Alessandrini, MD, Giuseppe Nasso, MD, Claudio Pragliola, MD, Nicola Luciani, MD, Mauro Morelli, MD, and Gianfederico Possati, MD

Invited Commentary
Ernst Wolner, MD, Daniel Zimpfer, and Michael Grimm

581 **Technical Advances in Total Aortic Arch Replacement**
Justus T. Strauch, MD, David Spielvogel, MD, Alexander Lauten, MS, Jan D. Galla, MD, Steven L. Lansman, MD, PhD, Kirk McMurtry, MD, and Randall B. Griepp, MD

591 **Thoracic Aortic Emergencies: Impact of Endovascular Surgery**
Gabriele Iannelli, MD, Federico Piscione, MD, Luigi Di Tommaso, MD, Mario Monaco, MD, Massimo Chiariello, MD, and Nicola Spampinato, MD

597 **Predictors of Cognitive Decline Following Coronary Artery Bypass Graft Surgery**
P. Michael Ho, MD, David B. Arciniegas, MD, Jim Grigsby, PhD, Martin McCarthy, Jr, PhD, Gerald O. McDonald, MD, Thomas E. Moritz, MS, A. Laurie Shroyer, PhD, Gulshan K. Sethi, MD, William G. Henderson, PhD, Martin J. London, MD, Catherine B. VillaNueva, RN, Frederick L. Grover, MD, and Karl E. Hammermeister, MD

Invited Commentary
Ola A. Selnes, PhD

604 **Effects of Hypertonic Saline-Dextran Solution in Cardiac Valve Surgery With Cardiopulmonary Bypass**
Ronaldo Bueno, MD, PhD, Adailton Carvalho Resende, MD, Ricardo Melo, MD, Vicente Avila Neto, MD, and Noedir A. G. Stolf, MD, PhD

Invited Commentary
Nicholas C. Cavarocchi, MD

612 **Cardiopulmonary Bypass in Man: Role of the Intestine in a Self-Limiting Inflammatory Response With Demonstrable Bacterial Translocation**
Marco Rossi, MD, Gabriele Sganga, MD, Marinella Mazzone, MD, Venanzio Valenza, MD, Sergio Guarneri, MD, Grazia Portale, MD, Luigi Carbone, MD, Lucia Gatta, PhD, Claudio Pioli, PhD, Maurizio Sanguinetti, MD, Massimo Montalto, MD, Franco Glieca, MD, Giovanni Fadda, MD, Rocco Schiavello, MD, and Nicolò G. Silveri, MD

619 **Does Off-Pump CABG Reduce Gastrointestinal Complications?**
Ilhan Sanisoglu, MD, Mustafa Guden, MD, Zehra Bayramoglu, MD, Ertan Sagbas, MD, Cengiz Dibekoglu, MD, S. Yavuz Sanisoglu, PhD, and Belhhan Akpinar, MD

626 **Predictors of Transfusion Requirements for Cardiac Surgical Procedures at a Blood Conservation Center**
David M. Moskowitz, MD, James J. Klein, MD, Aryeh Shander, MD, Katherine M. Cousineau, CCP, Richard S. Goldweit, MD, Carol Bodian, DrPH, Seth I. Perelman, MD, Hyun Kang, MD, Daniel A. Fink, MD, Howard C. Rothman, MD, and M. Arisan Ergin, MD, PhD

635 **Cost Analysis of Aprotinin for Coronary Artery Bypass Patients: Analysis of the Randomized Trials**
Peter K. Smith, MD, Santanu K. Datta, PhD, MBA, Lawrence H. Muhlbaier, PhD, Gregory Samsa, PhD, Andrea Nadel, PhD, and Joseph Lipscomb, PhD

Invited Commentary
Linda Shore-Lesserson, MD, David L. Reich, MD, and David H. Adams, MD

644 **Effects of Nafamostat Mesilate and Minimal-Dose Aprotinin on Blood-Foreign Surface Interactions in Cardiopulmonary Bypass**
Yuichiro Kaminishi, MD, Yuji Hiramatsu, MD, PhD, Yasunori Watanabe, MD, PhD, Yukihiro Yoshimura, MD, and Yuzuru Sakakibara, MD, PhD

651 **Sodium-Hydrogen Exchange Inhibition Attenuates In Vivo Porcine Myocardial Stunning**
Randy M. Stevens, MD, M. Salik Jahania, MD, Robert M. Mentzer, Jr, MD, and Robert D. Lasley, PhD

658 **Effect of the Na^+/H^+ Exchange Inhibitor Eniporide on Cardiac Performance and Myocardial High Energy Phosphates in Pigs Subjected to Cardioplegic Arrest**
Oliver Klass, MD, Uwe M. Fischer, MD, Elisabeth Perez, BS, Jerry Easo, MD, Marfalda Bosse, DVM, Juergen H. Fischer, MD, Paschalis Tossios, MD, and Uwe Mehlhorn, MD

664 **Continuous Cold Blood Cardioplegia Improves Myocardial Protection: A Prospective Randomized Study**
Yves A. G. Louagie, MD, PhD, Jacques Jamart, MD, Manuel Gonzalez, MD, Edith Collard, MD, Serge Broka, MD, Laurence Galanti, MD, PhD, and André Gruslin, MS

672 **Superficial Wound Dehiscence After Median Sternotomy: Surgical Treatment Versus Secondary Wound Healing**
Jacob Zeitani, MD, Fabio Bertoldo, MD, Carlo Bassano, MD, PhD, Alfonso Penta de Peppo, MD, Antonio Pellegrino, MD, Fadi M. El Fakhri, MD, and Luigi Chiariello, MD

676 **Risk Factors for Mediastinitis After Cardiac Surgery**
Cely Saad Abboud, MD, Sergio Barsanti Wey, MD, and Valeria Trancoso Baltar

684 **Biomechanical Study of a Poly-L-Lactide (PLLA) Sternal Pin in Sternal Closure After Cardiothoracic Surgery**
Takeshi Saito, MD, Atsushi Iguchi, MD, PhD, Masahiro Sakurai, MD, PhD, and Koichi Tabayashi, MD, PhD

NEW TECHNOLOGY

688 **Off-Pump Mitral Valve Repair Using the Coapsys Device: A Pilot Study in a Pacing-Induced Mitral Regurgitation Model**
Kiyotaka Fukamachi, MD, PhD, Masahiro Inoue, MD, PhD, Zoran B. Popović, MD, Kazuyoshi Doi, MD, Soren Schenk, MD, Hassan Nemeh, MD, Yoshio Ootaki, MD, PhD, Michael W. Kopcak, Jr, MS, Raymond Dessoffy, AA, James D. Thomas, MD, Richard W. Bianco, BA, James M. Berry, RDCS, and Patrick M. McCarthy, MD

Invited Commentary
Thoralf M. Sundt III, MD

CASE REPORTS

694 **Successful Treatment of Massive Pulmonary Embolism in the 38th Week of Pregnancy**
Yasunobu Funakoshi, MD, Masaaki Kato, MD, Toru Kuratani, MD, Norihisa Shigemura, MD, and Mitsunori Kaneko, MD

695 **Pediatric Thoracic Lymphangiomatosis: Is Chest Wall Resection Too Radical?**
Kostas Papagiannopoulos, MD, Dirk E. M. Van Raemdonck, PhD, Karen De Boeck, PhD, and Tony Lerut, PhD

697 **Successful Resuscitation of a Patient With Acute Massive Pulmonary Embolism Using Emergent Embolectomy**
Georgios P. Georghiou, MD, Ron Brauner, MD, Marius Berman, MD, Alon Stamler, MD, Lucio Glanz, MD, Bernardo A. Vidne, MD, and Eldad Erez, MD

699 **Recurrent Intercostal Herniation of the Liver**
Julian E. Losanoff, MD, Bruce W. Richman, MA, and James W. Jones, MD, PhD

701 **Migrating Pleural Mesothelial Cyst**
Michael J. Walker, MD, Steven C. Sieber, MD, and Shaliz Boorboor, BS

703 **Repair of Stab-Wound Laceration of the Aortic Arch Using Deep Hypothermia and Circulatory Arrest**
Rainald Seitelberger, MD, Jan Bialy, MD, and Maria A. Rajek, MD

704 **Role of *Bartonella Henselae* Endocarditis in the Nucleation of Aortic Valvular Calcification**
John J. Ghidoni, MD

707 **Dissection in a Pulmonary Autograft**
Edward H. Kincaid, MD, James D. Maloney, MD, Sidney W. Lavender II, PA-C, and Neal D. Kon, MD

708 **Coronary Endarterectomy and Stent Removal After Iatrogenic Perforation**
Toshihiro Fukui, MD, Shuichiro Takanashi, MD, Wahei Mihara, MD, Kazunori Ishikawa, MD, and Yasuyuki Hosoda, MD

711 **Failure of Argatroban Anticoagulation During Off-Pump Coronary Artery Bypass Surgery**
Mark A. Cannon, MD, John Butterworth, MD, Robert D. Riley, MD, and Jacqueline M. Hyland, MD

713 **Accessory Mitral Valve Tissue Causing Severe Left Ventricular Outflow Tract Obstruction in an Adult**
Yoshikazu Aoka, MD, Naoko Ishizuka, MD, PhD, Yasunari Sakomura, MD, PhD, Hirotaka Nagashima, MD, PhD, Masatoshi Kawana, MD, PhD, Akihiko Kawai, MD, PhD, and Hiroshi Kasanuki, MD, PhD

715 **Successful Salvage of Inferior Vena Cava Rupture During Reoperative Repair for Ascending Aortic Aneurysm**
Chien-Chang Chen, MD, and Shih-Rong Hsieh, MD

718 **Aortic Valve Replacement in a Patient With a Patent Internal Thoracic Artery Graft**
Takashi Ueda, MD, Tetsuji Kawata, MD, Hidehito Sakaguchi, MD, Nobuoki Tabayashi, MD, Takehisa Abe, MD, Tomoaki Hirose, MD, and Shigeki Taniguchi, MD

720 **Successful Biventricular Assistance After Heart Transplantation**
Jose M. Arribas, MD, Domingo A. Pascual, MD, Francisco Gutiérrez, MD, Víctor Ray, MD, Julio García-Puente, MD, Mariano Valdés, MD, and Ramón Arcas, MD

721 **Left Atrial Appendage Aneurysm in a Child**
Yoshihisa Tanoue, MD, Hideaki Kado, MD, Yuichi Shiokawa, MD, and Koichi Sagawa, MD

IMAGES IN CARDIOTHORACIC SURGERY

724 **Intrathoracic Parathyroid Adenoma**
Manisha R. Shende, MD, Sorin V. Pusca, MD, Dennis P. Quinlan, Jr, MD, Paul J. P. Bolanowski, MD, and James S. Donahoo, MD

725 **Elective Surgery For Fibroelastoma of the Aortic Valve**
David R. Koolbergen, MD, Pieter Voigt, MD, Maciej Kolowca, MD, Vincent T. H. B. M. Smit, MD, PhD, Soeresh T. Somer, MD, and Robert A. Dion, MD

HOW TO DO IT

726 **Uniportal VATS Wedge Pulmonary Resections**
Gaetano Rocco, MD, Antonio Martin-Ucar, MD, and Eliseo Passera, MD

729 **Posterior Mitral Valve Restoration for Ischemic Regurgitation**
Pino Fundarò, MD, Marco Pocar, MD, PhD, Andrea Moneta, MD, Francesco Donatelli, MD, and Adalberto Grossi, MD

731 **Optimizing Use of the Octopus System for Off-Pump Total Arterial Myocardial Revascularization With the TY Graft**
Calin Vicol, MD, Georg D. A. Nollert, MD, Helmut Mair, MD, and Bruno Reichart, MD

734 **Autologous Repair of Supravalvar Pulmonic Stenosis**
Emile A. Bacha, MD, Robert Kalimi, MD, Joanne P. Starr, MD, Jose Quinones, MD, and Peter Koenig, MD

REVIEWS

737 **Immunosuppression and Xenotransplantation of Cells for Cardiac Repair**
Yong-Fu Xiao, MD, PhD, Jiang-Yong Min, MD, and James P. Morgan, MD, PhD

745 **Off-Pump Myocardial Revascularization is Associated With Less Incidence of Stroke in Elderly Patients**
Thanos Athanasiou, MD, PhD, Sharif Al-Ruzzeh, FRCS, Pankaj Kumar, FRCS, Mary-Clare Crossman, MRCS, Mohamed Amrani, FRCS, John R. Pepper, FRCS, Rex Del Stanbridge, FRCS, Roberto Casula, FECTS, and Brian Glenville, FRCS

CORRESPONDENCE

754 **Discrepancy in Serum Carcinoembryonic Antigen Levels by Measuring Kits**
Noriyoshi Sawabata, MD, Masayoshi Inoue, MD, Shin-ichi Takeda, MD, and Hajime Maeda, MD

Reply
Gianfranco Buccheri, MD

754 **Blunt Chest Trauma and Tube Thoracostomy**
Atike Tekeli, MD, and Serdar Akgun, MD

Reply
Jacques T. Janson, FCS (SA), David G. Harris, FCS (SA), Johann Pretorius, MMed (Thor), and Gawie J. Rossouw, FCS (SA)

755 **Cefazolin Prophylaxis During Cardiac Operations**
Jean-Jacques Lehot, MD, PhD

Reply
Bruce J. Leavitt, MD, Erika K. Fellinger, MD, and James C. Hebert, MD

756 **Statue With Clubbed Feet: Another Reading**
Bernard G. Vasseur, MD, Philippe Lerch, BS, and Marc L. Sage, JD

Reply
Daniel Roux, MD, Bertrand Léobon, MD, Antoine Mugniot, MD, Chantal Diana, MD, Yves Glock, MD, PhD, and Gérard Fournial, MD

ANNOUNCEMENTS

A-34 **Information for Authors**

A-39 **Guidelines for Reviewers**

A-41 **Conditions for Publication Form**

A-43 **Events of Interest**

396 **Internet Discussion Forum**

409 **Requirements for Recertification/Maintenance of Certification in 2004**

420 **Notice from the American Board of Thoracic Surgery**

448 **Notice From the American Board of Thoracic Surgery Regarding Trainees and Candidates for Certification Who are Called to Military Service Related to the War on Terrorism**

469 **Southern Thoracic Surgical Association: Fifty-first Annual Meeting**

505 The Thoracic Surgery Foundation for Research and Education

A-47 Southern Thoracic Surgical Association Rules for Submission of Abstracts

A-48 Southern Thoracic Surgical Association Membership Application and Requirements

A-50 Classified Advertisements

A-59 Index to Advertisers

Number 3 March 2004

ETHICS IN CARDIOTHORACIC SURGERY

757 **Are Surgeons Ethically Obligated to Refer Patients to Other Surgeons Who Achieve Better Results?**
Nicholas T. Kouchoukos, MD, Lawrence H. Cohn, MD, and Robert M. Sade, MD

757 **Pro**
Nicholas T. Kouchoukos, MD

758 **Con**
Lawrence H. Cohn, MD

760 **Concluding Remarks**
Robert M. Sade, MD

ORIGINAL ARTICLES: CARDIOVASCULAR

761 **Current Status and Outcomes of Coronary Revascularization 1999 to 2002: 148,396 Surgical and Percutaneous Procedures**
Michael J. Mack, MD, Phillip P. Brown, MD, Aaron D. Kugelmass, MD, Salvatore L. Battaglia, Lynn G. Tarkington, April W. Simon, Steven D. Culler, and Edmund R. Becker

769 **Mortality on the Waiting List for Coronary Artery Bypass Grafting: Incidence and Risk Factors**
Helena Rexius, MD, Gunnar Brandrup-Wognsen, MD, PhD, Anders Odén, PhD, and Anders Jeppsson, MD, PhD

Invited Commentary
Richard J. Novick, MD

776 **Effects of Intracoronary Shunts on Coronary Endothelial Coating in the Human Beating Heart**
Herbert B. Hangler, MD, Kristian Pfaller, PhD, Elfriede Ruttmann, MD, Daniel Hoefer, MD, Thomas Schachner, MD, Guenther Laufer, MD, and Herwig Antretter, MD

781 **Outcomes of Early Extubation After Bypass Surgery in the Elderly**
Ulrich Guller, MD, MHS, Kevin J. Anstrom, PhD, William L. Holman, MD, Richard M. Allman, MD, Monique Sansom, MPH, and Eric D. Peterson, MD, MPH

789 **Off-Pump Versus On-Pump Coronary Surgery: Final Results From a Prospective Randomized Study PRAGUE-4**
Zbynek Straka, MD, PhD, Petr Widimsky, MD, PhD, Karel Jirasek, MD, Petr Stros, MD, Jan Votava, MD, Tomas Vanek, MD, PhD, Petr Brucek, MD, Miroslav Kolesar, MD, and Rudolf Spacek, MD, PhD

794 **Long-Term Follow-Up of Coronary Artery Bypass Grafting in Three-Vessel Disease Using Exclusively Pedicled Bilateral Internal Thoracic and Right Gastroepiploic Arteries**
Giuseppe Tavilla, MD, Arie Pieter Kappetein, MD, PhD, Jerry Braun, MD, Jiwan Gopie, MD, Andrew Tjon Joek Tjien, MD, and Robert A. E. Dion, MD

Invited Commentary
David Taggart, MD, FRCS

800 **Isotropic Half-Millimeter Angiography of Coronary Artery Bypass Grafts With 16-Slice Computed Tomography**
Marc Dewey, MD, Alexander Lembcke, MD, Christian Enzweiler, MD, Bernd Hamm, MD, and Patrik Rogalla, MD

805 **Mid-Term Structural Change in the Radial Artery Grafts After Coronary Artery Bypass Grafting**
Hiroaki Hagiwara, MD, Toshiaki Ito, MD, Haruo Kamiya, MD, Toshiaki Akita, MD, Akihiko Usui, MD, and Yuichi Ueda, MD

Invited Commentary
Guo-Wei He, MD, PhD

812 **Therapeutic Angiogenesis in Chronically Ischemic Porcine Myocardium: Comparative Effects of bFGF and VEGF**
G. Chad Hughes, MD, Shankha S. Biswas, MD, Bangliang Yin, MD, R. Edward Coleman, MD, Timothy R. DeGrado, PhD, Carolyn K Landolfo, MD, James E. Lowe, MD, Brian H. Annex, MD, and Kevin P. Landolfo, MD

819 **Open Pulmonary Embolectomy for Treatment of Major Pulmonary Embolism**
Kiran Yalamanchili, MBBS, Arlen G. Fleisher, MD, Stuart G. Lehrman, MD, Howard I. Axelrod, MD, Rocco J. Lafaro, MD, Mohan R. Sarabu, MD, Elias A. Zias, MD, and Richard A. Moggio, MD

Invited Commentary
Riyad Karmy-Jones, MD

824 **The Efficacy of Supplemental Magnesium in Reducing Atrial Fibrillation After Coronary Artery Bypass Grafting**
Stephen R. Hazelrigg, MD, Theresa M. Boley, MSN, Ibrahim B. Cetindag, MD, Kreigh P. Moulton, MD, Gary L. Trammell, PhD, Joan E. Polancic, PhD, Tilitha S. Shawgo, MSN, Jacquelyn A. Quin, MD, and Stephen Verhulst, PhD

831 **Epicardial Atrial Defibrillation: Successful Treatment of Postoperative Atrial Fibrillation**
Amit N. Patel, MD, Baron L. Hamman, MD, Amy N. Patel, BS, Robert F. Hebeler, MD, Richard E. Wood, MD, Carol Ann Cockerham, RN, Brittany A. Willey, RN, and Harold C. Urschel, Jr, MD

838 **Preoperative Use of Sotalol Versus Atenolol for Atrial Fibrillation After Cardiac Surgery**
Rafael Sanjuán, PhD, Marisa Blasco, PhD, Nieves Carbonell, MD, Angela Jordá, MD, Julio Núñez, MD, Juan Martínez-León, PhD, and Eduardo Otero, PhD

844 **Further Insights Into Normal Aortic Valve Function: Role of a Compliant Aortic Root on Leaflet Opening and Valve Orifice Area**
Vangipuram Canchi Sripathi, B.Tech, Ramarathnam Krishna Kumar, PhD, and Komarakshi R. Balakrishnan, MD

852 **Influence of Inotropy and Chronotropy on the Mitral Valve Sphincter Mechanism**
Joseph H. Gorman III, MD, Benjamin M. Jackson, MD, Sina L. Moainie, MD, Yoshiharu Enomoto, MD, and Robert C. Gorman, MD

Invited Commentary
Tomasz A. Timek, MD, and D. Craig Miller, MD

859 **Is Severe Right Ventricular Failure in Left Ventricular Assist Device Recipients a Risk Factor for Unsuccessful Bridging to Transplant and Post-Transplant Mortality**
Jeffrey A. Morgan, MD, Ranjit John, MD, Brian J. Lee, BA, Mehmet C. Oz, MD, and Yoshifumi Naka, MD, PhD

864 **Functional Neointima Characterization of Vascular Prostheses in Human**
Thorsten Walles, MD, Heidi Görler, MD, Carmen Puschmann, PhD, and Heike Mertsching, PhD

869 **Clinical Significance of PlA Polymorphism of Platelet GP IIb/IIIa Receptors During Long-Term VAD Support**
Evgenij V. Potapov, MD, Stanislav Ignatenko, MD, Boris A. Nasseri, MD, Matthias Loebe, MD, PhD, Cornelia Harke, Martin Bettmann, MD, Anke Doller, MD, Vera Regitz-Zagrosek, MD, PhD, and Roland Hetzer, MD, PhD

Invited Commentary
Ranjit John, MD, and Yoshifumi Naka, MD, PhD

875 **Influence of IFN-γ Polymorphism on the Development of Coronary Vasculopathy After Cardiac Transplantation**
Cameron G. Densem, MRCP, Ian V. Hutchinson, DSe, PhD, Nizar Yonan, FRCS, and Nicholas H. Brooks, FRCP

881 **Late Results of the Peel Operation for Replacement of Failing Extracardiac Conduits**
Christian A. Bermudez, MD, Joseph A. Dearani, MD, Francisco J. Puga, MD, Hartzell V. Schaff, MD, Carole A. Warnes, MD, Patrick W. O'Leary, MD, Cathy D. Schleck, BS, and Gordon K. Danielson, MD

889 **Outcomes of Tricuspid Atresia in the Fontan Era**
Rekwan Sittiwangkul, MD, Anthony Azakie, MD, Glen S. Van Arsdell, MD, William G. Williams, MD, and Brian W. McCrindle, MD

895 **Atrioventricular Septal Defects: Effect of Bridging Leaflet Division on Early Valve Function**
Randall S. Fortuna, MD, David A. Ashburn, MD, Nilto Carias De Oliveira, MD, Harold M. Burkhart, MD, Igor E. Konstantinov, MD, John G. Coles, MD, Jeffery F. Smallhorn, MD, William G. Williams, MD, and Glen S. Van Arsdell, MD

903 **Morphometry of Coronary Capillaries in Hypoplastic Left Heart Syndrome**
Caner Salih, MB, ChB, FRCS, Mary N. Sheppard, MD, FRCPath, and Siew Yen Ho, PhD, FRCPath

Invited Commentary
Marshall L. Jacobs, MD

908 **The Low Resistance Strategy for the Perioperative Management of the Norwood Procedure**
Toshihide Nakano, MD, Hideaki Kado, MD, Yuichi Shiokawa, MD, Koji Fukae, MD, Yosuke Nishimura, MD, Kazuyuki Miyamoto, MD, Yoshihisa Tanoue, MD, Hideki Tatewaki, MD, and Naoki Fusazaki, MD

913 **Late Results After Mitral Valve Replacement With Bileaflet Mechanical Prosthesis in Children: Evaluation of Prosthesis-Patient Mismatch**
Munetaka Masuda, MD, Hideaki Kado, MD, Hideki Tatewaki, MD, Yuichiro Shiokawa, MD, and Hisataka Yasui, MD

918 **Lung Perfusion With Protective Solution Relieves Lung Injury in Corrections of Tetralogy of Fallot**
Bo Wei, MD, Yinglong Liu, MD, Qiang Wang, MD, Cuntao Yu, MD, Cun Long, MD, Yongnan Chang, MD, and Yingmao Ruan, MD

925 **Bivalirudin Versus Heparin and Protamine in Off-Pump Coronary Artery Bypass Surgery**
Alan F. Merry, FANZCA, Peter J. Raudkivi, FRACS, Neil G. Middleton, FCASA, John M. McDougall, FRCA, Parma Nand, FRACS, Brigid P. Mills, MHSc, Bruce J. Webber, MHSc, Chris M. Frampton, PhD, and Harvey D. White, DSc

Invited Commentary
Theodore E. Warkentin, MD

932 **Effect of Complement Inhibition and Heparin Coating on Artificial Surface–Induced Leukocyte and Platelet Activation**
Knut Tore Lappegård, MD, Michael Fung, PhD, Grethe Bergseth, BS, Johan Riesenfeld, PhD, John D. Lambris, PhD, Vibeke Videm, MD, PhD, and Tom Eirik Mollnes, MD, PhD

942 **Impact of Pexelizumab, an Anti-C5 Complement Antibody, on Total Mortality and Adverse Cardiovascular Outcomes in Cardiac Surgical Patients Undergoing Cardiopulmonary Bypass**
Stanton K. Shernan, MD, Jane C. K. Fitch, MD, Nancy A. Nussmeier, MD, John C. Chen, MD, Scott A. Rollins, PhD, Christopher F. Mojcik, MD, PhD, Kevin J. Malloy, PhD, Thomas G. Todaro, MD, JD, Thomas Filloon, PhD, Steven W. Boyce, MD, Deepak M. Gangahar, MD, Michael Goldberg, MD, Lawrence J. Saidman, MD, and Dennis T. Mangano, MD, PhD, on behalf of the Pexelizumab Study Investigators

Invited Commentary
Rolf Svedjeholm, MD, PhD

951 **Monocyte Fc Gamma Receptor Expression in Patients Undergoing Coronary Artery Bypass Grafting**
Demetrios C. Stefanou, FRCS, George Asimakopoulos, FRCS, Darshna R. Yagnik, MS, Dorian O. Haskard, FRCP, Jon R. Anderson, FRCS, Pandelis Philippidis, FRCS, R. Clive Landis, PhD, and Kenneth M. Taylor, MD

956 **Neutrophil Depletion Reduces Myocardial Reperfusion Morbidity**
George M. Palatianos, MD, Gilbert Balentine, Emmanuel G. Papadakis, MD, Constantine D. Triantafillou, MD, Mary I. Vassili, MD, Angela Lidoriki, Athanasios Dinopoulos, and George M. Astras, MD

962 **Changes in Hemostasis During Pediatric Heart Surgery: Impact of a Biocompatible Heparin-Coated Perfusion System**
Eva Jensen, MD, Svenerik Andréasson, MD, PhD, Anders Bengtsson, MD, PhD, Håkan Berggren, MD, PhD, Rolf Ekroth, MD, PhD, Lars E. Larsson, MD, PhD, and John Ouchterlony, MD

968 **Acute Renal Failure in Coronary Artery Bypass Surgery: Independent Effect of Cardiopulmonary Bypass**
Mark I. Stallwood, FRCA, Antony D. Grayson, BS, Keith Mills, FRCA, and Nigel D. Scawn, FRCA

973 **New Technology, Old Standards: Disparate Activated Clotting Time Measurements by the Hemochron Jr Compared With the Standard Hemochron**
Christopher L. Aylsworth, PA-C, Faith Stefan, CCP, Karl Woitas, CCP, Randall H. Rieger, PhD, Martin LeBoutillier III, MD, and Verdi J. DiSesa, MD

977 **Cardiac Reoperation by Carpentier Bicaval Femoral Venous Cannula: GATA Experience**
Erkan Kuralay, MD, Cengiz Bolcal, MD, Faruk Cingoz, MD, Celalettin Günay, MD, Vedat Yildirim, MD, Selim Kilic, MD, Ertugrul Özal, MD, Ufuk Demirkilic, MD, Mehmet Arslan, MD, and Harun Tatar, MD

Invited Commentary
James D. Fonger, MD

983 **Fresh Frozen Plasma in the Pediatric Pump Prime: A Prospective, Randomized Trial**
Mary M. McCall, MSN, Mindy M. Blackwell, MS, Jonathan T. Smyre, MS, Joseph J. Sistino, MPA, Jeffrey R. Acsell, BS, B. Hugh Dorman, MD, PhD, and Scott M. Bradley, MD

988 **New Technique of Right Heart Bypass in Congenital Heart Surgery With Autologous Lung as Oxygenator**
Krishnanaik Shivaprakasha, MCh, Isaac Rameshkumar, BS, Raman Krishna Kumar, DM, Suresh Gangadharan Nair, MD, Sajan Koshy, MCh, Gopalraj Sumangala Sunil, MCh, and Suresh Gururaja Rao, MCh

994 **Preoperative Glucocorticoids Decrease Pulmonary Hypertension in Piglets After Cardiopulmonary Bypass and Circulatory Arrest**
Jeffrey M. Pearl, MD, Steven M. Schwartz, MD, David P. Nelson, MD, PhD, Connie J. Wagner, BS, Jefferson M. Lyons, MD, Steven M. Bauer, MS, and Jodie Y. Duffy, PhD

ORIGINAL ARTICLES: GENERAL THORACIC

1001 **Sternal Resection and Reconstruction for Primary Malignant Tumors**
Alain R. Chapelier, MD, PhD, Marie-Christine Missana, MD, Benoit Couturaud, MD, Elie Fadel, MD, PhD, Dominique Fabre, MD, Sacha Mussot, MD, Pierre Pouillart, MD, and Philippe G. Dartevelle, MD

1008 **Gene Expression Profiles in Esophageal Adenocarcinoma**
Peter S. Dahlberg, MD, PhD, Lance F. Ferrin, MD, PhD, Suzanne M. Grindle, BS, Curtis M. Nelson, BS, Chuong D. Hoang, MD, and Blake Jacobson, PhD

1016 **Pleural Perfusion Thermo-Chemotherapy Under VATS: A New Less Invasive Modality for Advanced Lung Cancer With Pleural Spread**
Norihisa Shigemura, MD, Akinori Akashi, MD, Tomoyuki Nakagiri, MD, Kenji Hazama, MD, Mitsunori Ohta, MD, and Hikaru Matsuda, MD

Invited Commentary
Joseph B. Zwischenberger, MD, and Roger A. Vertrees, PhD, CCP

1023 **Simultaneous Lung Resection for Cancer and Myocardial Revascularization Without Cardiopulmonary Bypass (Off-Pump Coronary Artery Bypass Grafting)**
Wojciech Dyszkiewicz, MD, PhD, Marek M. Jemielity, MD, PhD, Cezary T. Piwkowski, MD, Bartłomiej Perek, MD, and Mariusz Kasprzyk, MD

1028 **Sealing of the Mediastinum With a Local Hemostyptic Agent Reduces Chest Tube Duration After Complete Mediastinal Lymph Node Dissection for Stage I and II Non–Small Cell Lung Carcinoma**
Martin Czerny, MD, Tatjana Fleck, MD, Andreas Salat, MD, Daniel Zimpfer, MD, Walter Klepetko, MD, Ernst Wolner, MD, and Michael Rolf Mueller, MD

1033 **Preoperative Imaging of the Lung Sentinel Lymphatic Basin With Computed Tomographic Lymphography: A Preliminary Study**
Kazuhiro Ueda, MD, Kazuyoshi Suga, MD, Yoshikazu Kaneda, MD, Tao-Sheng Li, MD, Katsuhiko Ueda, RT, and Kimikazu Hamano, MD

Invited Commentary
John A Odell, MD

1039 **Salvage Intensive Care Following Initial Recovery From Pulmonary Resection: Is It Justified?**
John E. Pilling, MRCS, Antonio E. Martin-Ucar, FRCS, and David A. Waller, FRCS (CTh)

1045 **Emergency Percutaneous Tracheostomy in Trauma Patients: An Early Experience**
Alon Ben-Nun, MD, PhD, Edward Altman, MD, and Lael-Anson E. Best, MD

1048 **Trigger for Intercellular Adhesion Molecule-1 Expression in Rat Lungs Transplanted From Non–Heart-Beating Donors**
Thomas M. Egan, MD, Yalaunda Thomas, MD, Debra Gibson, MD, William Funkhouser, MD, PhD, Paola Ciriaco, MD, Andy Kiser, MD, John Sadoff, MD, Mark Bleiweis, MD, and Clarence E. Davis, PhD

1056 **β-Chemokine Function in Experimental Lung Ischemia-Reperfusion Injury**
Baiya Krishnadasan, MD, Alexander S. Farivar, MD, Babu V. Naidu, FRCS, Steven M. Woolley, MRCS, Karen Byrne, BS, Charles H. Fraga, MS, and Michael S. Mulligan, MD

NEW TECHNOLOGY

1063 **Digital Video Recording of Cardiac Surgical Procedures**
A. Sampath Kumar, MCh, and Harinder Pal, DipME

Invited Commentary
W. Randolph Chitwood, Jr, MD, FACS

CASE REPORTS

1066 **Partial Pericardial Defect Associated With Ruptured Aortic Dissection of the Ascending Aorta: A Rare Feature Presenting Severe Left Hemothorax Without Cardiac Tamponade**
Masato Nakajima, MD, Kouji Tsuchiya, MD, Yuji Naito, MD, Hidenori Inoue, MD, Kensuke Kobayashi, MD, and Eiki Mizutani, MD

1069 **Congenital Pericardial Defect Associated With Ruptured Type A Aortic Dissection**
Naruto Matsuda, MD, Akira Marumoto, MD, Hideki Nakashima, MD, Yoshinobu Nakamura, MD, Satoshi Kamihira, MD, Shingo Ishiguro, MD, and Shigetsugu Ohgi, MD

1070 **Left Ventricular Rupture After Mitral Surgery: Repair by Patch and Sealing**
Roland Fasol, MD, Thomas Wild, MD, and Salah El Dsoki, MD

1072 **Right Internal Thoracic Artery Remodeling 18 Years After Circumflex System Grafting**
Luiz B. Puig, MD, Paulo R. Soares, MD, Fernando Platania, MD, Luís A. O. Dallan, MD, Luiz A. F. Lisboa, MD, Luiz J. Kajita, MD, José A. F. Ramires, MD, and Sérgio A. Oliveira, MD

1075 **Pinhole Rupture of Aortic Root Aneurysm With Severe Atherosclerotic Change**
Hidenori Sako, MD, PhD, Tetsuo Hadama, MD, PhD, Osamu Shigemitsu, MD, PhD, Shinji Miyamoto, MD, PhD, Hirofumi Anai, MD, PhD, Tomoyuki Wada, MD, PhD, and Naoki Hijiya, MD, PhD

1077 **Ventricular Tachycardia Associated With Transmyocardial Migration of an Epicardial Pacing Wire**
David J. Meier, MD, Kamala P. Tamirisa, MD, and Daniel T. Eitzman, MD

1079 **A Large Lipoma of the Ascending Aorta**
Piroze M. Davierwala, MD, Tirone E. David, MD, and Jaglish Butany, MD

1081 **Left Main Coronary Artery-to-Pulmonary Artery Fistula With Severe Aneurysmal Dilatation**
Kimberly L. Gandy, MD, PhD, Abdallah G. Rebeiz, MD, Andrew Wang, MD, and James J. Jaggers, MD

1083 **Intracardiac Shrapnel in a Polytraumatized Child**
Hrvoje Gasparovic, MD, Ranka Stern-Padovan, MD, PhD, Stipe Batinica, MD, PhD, Dalibor Saric, MD, and Ivan Jelic, MD, PhD

1085 **Horseshoe Lung with Left Lung Hypoplasia and Critical Pulmonary Venous Stenosis**
Joel Lutterman, MD, Roy Jedeikin, MD, and David C. Cleveland, MD

1087 **Total Right Ventricular Dependent Coronary Circulation in Pulmonary Atresia With Intact Ventricular Septum**
Paul Lajos, MD, Jon Love, MD, Mubadda A. Salim, MD, Wenle Wang, MD, and Marcelo G. Cardarelli, MD

1088 **A Case of Thymoma Protruding Into the Superior Vena Cava Through the Thymic Vein**
Yasuji Terada, MD, Nobuhiro Ono, MD, Tetsuo Noguchi, MD, Kunihiko Kamakari, MD, and Mitsuru Kitano, MD

1091 **Extrapleural Thoracoscopic Excision of a Mediastinal Bronchogenic Cyst in a Patient With Dense Pleural Adhesions**
Hiroki Sato, MD, PhD, Atsushi Watanabe, MD, PhD, Tamotsu Yamaguchi, MD, PhD, Nobuhiro Harada, MD, Satomi Inoue, MD, PhD, and Tomio Abe, MD, PhD

1093 **A Case of a Bronchogenic Cyst in a Rare Location**
Aydın Şanli, MD, Ahmet Önen, MD, Emel Ceylan, MD, Erkan Yilmaz, MD, Erdem Silistreli, MD, and Ünal Açikel, MD

1094 **Pseudo Tumors of the Lung After Lung Volume Reduction Surgery**
Inger F. Oey, FRCS, Kanagaratnam Jeyapalan, FRCR, James J. Entwisle, FRCR, and David A. Waller, FRCS CTh

1096 **Peripheral Intrapulmonary Lymph Node Metastases of Non-Small-Cell Lung Cancer**
Souheil Boubia, MD, Françoise Lepimpec Barthes, MD, Claire Danel, MD, and Marc Riquet, MD, PhD

1098 **Superimposed Spontaneous Esophageal Perforation in Congenital Esophageal Stenosis**
J. Andres Gonzalez, MD, Christopher M. Craft, MD, T. Theron Knight, MD, and William H. Messerschmidt, MD

IMAGES IN CARDIOTHORACIC SURGERY

1101 **Endovascular Stent Grafting for Rupture of a Thoracoabdominal Aortic Aneurysm After Replacement of the Entire Aorta**
Yoshikazu Hachiro, MD, Hideyuki Harada, MD, Tohru Mawatari, MD, Toshio Baba, MD, Yukiko Honma, MD, and Tomio Abe, MD, PhD

1102 **Needle Embolism to the Heart**
Craig J. Baker, MD, John J. Nigro, MD, Casey W. Daggett, MD, and Winfield J. Wells, MD

HOW TO DO IT

1103 **Leaflet Folding Plasty Combined With Annular Plication for Mitral Valve Repair**
Masato Nakajima, MD, Kouji Tsuchiya, MD, Hidenori Inoue, MD, Kensuke Kobayashi, MD, Eiki Mizutani, MD, and Koki Takizawa, MD

1105 **Dorsal Minithoracotomy for Ductus Arteriosus Clip Closure in Premature Neonates**
Walter V. A. Vicente, MD, PhD, Alfredo J. Rodrigues, MD, PhD, Paulo J. F. Ribeiro, MD, PhD, Paulo R. B. Évora, MD, PhD, Antonio C. Menardi, MD, Cesar A. Ferreira, MD, Lafaiete Alves, Jr, MD, and Solange Bassetto, MD

1107 **A New Retraction-Suspension Device for Limited Upper Sternotomy**
Maurizio A. Boaron, MD

1109 **T-Modification of Sternotomy to Accommodate a Low-Lying Tracheostomy**
Kenneth J. Woodside, MD, Joseph B. Zwischenberger, MD, D. Adrian Olvera, and Vincent R. Conti, MD

REVIEWS

1110 **Clinical Experience With Devices for Facilitated Anastomoses in Coronary Artery Bypass Surgery**
Thierry P. Carrel, MD, Friedrich S. Eckstein, MD, Lars Englberger, MD, Pascal A. Berdat, MD, and Jürg Schmidli, MD

1121 **Cellular Cardiomyoplasty: Clinical Application**
Juan C. Chachques, MD, PhD, Christophe Acar, MD, Jesus Herreros, MD, Jorge C. Trainini, MD, Felipe Prosper, MD, Nicola D'Attellis, MD, Jean-Noel Fabiani, MD, and Alain F. Carpentier, MD, PhD

REPORT

1131 **2003 Meeting Southern Thoracic Surgical Association**
John H. Calhoon, MD

CORRESPONDENCE

1133 **Immunosuppression and Xenotransplantation of Cells for Cardiac Repair**
Husnain Kh. Haider, MPharm, PhD, Lei Ye, MD, Shujia Jiang, MD, Peter K. Law, PhD, and Eugene K. W. Sim, FRCS

Reply
Yong-Fu Xiao, MD, PhD, Jiang-Yong Min, MD, and James P. Morgan, MD, PhD

1134 **Alternative Energy Sources for Atrial Fibrillation**
A. Marc Gillinov, MD, and Patrick M. McCarthy, MD

1134 **Recommendation for IMA Use in Dialysis Patients With Ipsilateral Fistula**
Frank A. Baciewicz, Jr, MD

Reply
Hiroshi Kato, MD, and Seiichiro Ikawa, MD

1135 **A Word of Caution About the Skeletonization of the Right Gastroepiploic Artery**
Hiroshi Osawa, MD, PhD, and Yuzuru Matsuyama, MD, PhD

Reply
Tohru Asai, MD

ANNOUNCEMENTS

A-36 **Information for Authors**

A-41 **Guidelines for Reviewers**

A-43 **Conditions for Publication Form**

A-45 **Events of Interest**

775 **Internet Discussion Forum**

811 **Requirements for Recertification/ Maintenance of Certification in 2004**

950 **Notice From the American Board of Thoracic Surgery Regarding Trainees and Candidates for Certification Who Are Called to Military Service Related to the War on Terrorism**

993 **Notice from the American Board of Thoracic Surgery**

1022 **The Thoracic Surgery Foundation for Research and Education**

1044 **Southern Thoracic Surgical Association: Fifty-first Annual Meeting**

A-49 **Southern Thoracic Surgical Association Rules for Submission of Abstracts**

A-50 **Southern Thoracic Surgical Association Membership Application and Requirements**

A-52 **Classified Advertisements**

A-59 **Index to Advertisers**

Number 4 April 2004

EDITORIALS

1137 **Validity of The Society of Thoracic Surgeons National Adult Cardiac Surgery Database**
Karl F. Welke, MD, T. Bruce Ferguson, Jr, MD, Laura P. Coombs, PhD, Rachel S. Dokholyan, MPH, Cindy J. Murray, BSN, Mary A. Schrader, and Eric D. Peterson, MD, MPH

1140 **The Society of Thoracic Surgeons Practice Guidelines**
Fred H. Edwards, MD, and T. Bruce Ferguson, MD

THE STATISTICIAN'S PAGE

1142 **Bootstrap Resampling Methods: Something for Nothing?**
Gary L. Grunkemeier, PhD, and YingXing Wu, MD

ETHICS IN CARDIOTHORACIC SURGERY

1145 **The Surgeon's Work in Transition: Should Surgeons Spend More Time Outside the Hospital?**
Jamie Dickey, PhD, Ross M. Ungerleider, MD, Joseph S. Coselli, MD, Lori D. Conklin, MD, and Robert M. Sade, MD

1145 **Pro**
Jamie Dickey, PhD, and Ross M. Ungerleider, MD

1149 **Con**
Joseph S. Coselli, MD, and Lori D. Conklin, MD

1150 **Concluding Remarks**
Robert M. Sade, MD

ORIGINAL ARTICLES: GENERAL THORACIC

1152 **Sleeve Lobectomy Versus Pneumonectomy for Lung Cancer: A Comparative Analysis of Survival and Sites or Recurrences**
Jean Deslauriers, MD, Jocelyn Grégoire, MD, Louis F. Jacques, MD, Michel Piraux, MD, Liu Guojin, MD, and Yves Lacasse, MD

1157 **Predictive Factors for Survival in Surgically Resected Clinical IA Peripheral Adenocarcinoma of the Lung**
Yukinori Sakao, MD, PhD, Takahiko Nakazono, MD, Toru Sakuragi, MD, PhD, Masafumi Natsuaki, MD, PhD, and Tsuyoshi Itoh, MD, PhD

Invited Commentary
Harvey Pass, MD

1163 **Large Cell Neuroendocrine Carcinoma of the Lung: A 10-Year Clinicopathologic Retrospective Study**
Massimiliano Paci, Alberto Cavazza, Valerio Annessi, Innocenza Putrino, Guglielmo Ferrari, Salvatore De Franco, and Giorgio Sgarbi

1168 **Large Cell Neuroendocrine Carcinoma of the Lung: An Aggressive Disease Potentially Treatable With Surgery**
Christophe Doddoli, MD, Fabrice Barlesi, MD, Bruno Chetaille, MD, Louise Garbe, MD, Pascal Thomas, MD, Roger Giudicelli, MD, and Pierre Fuentes, MD

1173 **Histological Determinants of Survival in Completely Resected T1-2N1M0 Nonsmall Cell Cancer of the Lung**
Omar A. Khan, James J. Fitzgerald, Mark L. Field, Irshad Soomro, F. David Beggs, W. Ellis Morgan, and John P. Duffy

1179 **Pulmonary Metastasectomy for Uterine Cervical Cancer: A Multivariate Analysis**
Kaichiro Yamamoto, MD, PhD, Hiroyuki Yoshikawa, MD, PhD, Kenji Shiromizu, MD, PhD, Toshiaki Saito, MD, PhD, Kazuo Kuzuya, MD, PhD, Ryuichiro Tsunematsu, MD, PhD, and Toshiharu Kamura, MD, PhD

1183 **WHO Histologic Classification is a Prognostic Indicator in Thymoma**
Kazuya Kondo, MD, PhD, Kiyoshi Yoshizawa, MD, PhD, Masaru Tsuyuguchi, MD, PhD, Suguru Kimura, MD, PhD, Masayuki Sumitomo, MD, Junji Morita, MD, PhD, Takanori Miyoshi, MD, PhD, Shoji Sakiyama, MD, PhD, Kiyoshi Mukai, MD, PhD, and Yasumasa Monden, MD, PhD

1189 **Metachronous Gastric Carcinoma From a Gastric Tube After Radical Surgery for Esophageal Carcinoma**
Nobuhiko Okamoto, MD, Soji Ozawa, MD, Yuko Kitagawa, MD, Yoshimasa Shimizu, MD, and Masaki Kitajima, MD

1193 **Preoperative Chemoradiation Therapy Does Not Improve Early Survival After Esophagectomy for Patients With Clinical Stage III Adenocarcinoma of the Esophagus**
Jessica S. Donington, MD, Daniel L. Miller, MD, Mark S. Allen, MD, Claude Deschamps, MD, Francis C. Nichols III, MD, and Peter C. Pairolero, MD

1200 **Complicated Hydatid Cysts of the Lung: Clinical and Therapeutic Issues**
Akın Kuzucu, MD, Ömer Soysal, MD, Mehmet Özgel, MD, and Saim Yologlu, PhD

1205 **Predictors of Prolonged Air Leak After Pulmonary Lobectomy**
Alessandro Brunelli, MD, Marco Monteverde, MD, Alessandro Borri, MD, Michele Salati, MD, Rita D. Marasco, MD, and Aroldo Fianchini, MD

Invited Commentary
Cameron Wright, MD

1211 **Complete Laryngotracheal Disruption Caused by Blunt Injury**
Ming-Ho Wu, MD, Yueh-Feng Tsai, MD, Mu-Yen Lin, MD, I-Lin Hsu, MD, and Yaou Fong, MD

1216 **Measurement of Tracheal Size in Children With Congenital Heart Disease by Computed Tomography**
Shyh-Jye Chen, MD, Tiffany Ting-Fang Shih, MD, Kao-Lang Liu, MD, Ing-Sh Chiu, MD, PhD, Mei-Hwan Wu, MD, PhD, Hsu-Yi Chen, MD, and Wen-Jeng Lee, MD

1222 **Overexpressed Nuclear Factor κB Correlates With Enhanced Expression of Interleukin 1β and Inducible Nitric Oxide Synthase in Aged Murine Lungs to Endotoxic Stress**
Cheow K. Chang, PhD, and Joseph LoCicero III, MD

Invited Commentary
Mark I. Block, MD

ORIGINAL ARTICLES: CARDIOVASCULAR

1228 **Transmyocardial Revascularization: 5-Year Follow-Up of a Prospective, Randomized Multicenter Trial**
Keith B. Allen, MD, Robert D. Dowling, MD, William W. Angell, MD, Deepak M. Gangahar, MD, Tommy L. Fudge, MD, Wayne Richenbacher, MD, Samuel L. Selinger, MD, Michael R. Petracek, MD, and Douglas Murphy, MD

1235 **Early Mortality in Coronary Bypass Surgery: The EuroSCORE Versus the Society of Thoracic Surgeons Risk Algorithm**
Johan Nilsson, MD, Lars Algotsson, MD, PhD, Peter Höglund, MD, PhD, Carsten Lührs, MD, and Johan Brandt, MD, PhD

Invited Commentary
Jeffrey Gold, MD

1241 **Postoperative Atrial Fibrillation is a Major Cause of Stroke After On-Pump Coronary Artery Bypass Surgery**
Jarmo Lahtinen, MD, Fausto Biancari, MD, PhD, Esa Salmela, MD, Martti Mosorin, MD, Jari Satta, MD, PhD, Pekka Rainio, MD, PhD, Jussi Rimpiläinen, MD, PhD, Martti Lepojärvi, MD, PhD, and Tatu Juvonen, MD, PhD

1245 **Coronary Surgery in Patients With Peripheral Vascular Disease: Effect of Avoiding Cardiopulmonary Bypass**
Shishir Karthik, FRCS, Ghassan Musleh, FRCS, Antony D. Grayson, BS, Daniel J. M. Keenan, FRCS, D. Mark Pullan, FRCS(C-Th), Walid C. Dihmis, FRCS(C-Th), Ragheb Hasan, FRCS(C-Th), and Brian M. Fabri, FRCS(Ed)

1250 **On-Pump Versus Off-Pump Coronary Artery Bypass Grafting: Impact on Postoperative Renal Failure Requiring Renal Replacement Therapy**
Jan Bucerius, MD, Jan F. Gummert, MD, PhD, Thomas Walther, MD, PhD, Dierk V. Schmitt, MD, Nicolas Doll, MD, Volkmar Falk, MD, PhD, and Friedrich W. Mohr, MD, PhD

1257 **Skeletonization Does Not Influence Internal Thoracic Artery Innervation**
Mario Gaudino, MD, Amelia Toesca, BS, Franco Glieca, MD, Fabiana Girola, MD, Nicola Luciani, MD, and Gianfederico Possati, MD

1262 **Robotic Skeletonizing of the Internal Thoracic Artery: Is It Safe?**
Gil Bolotin, MD, PhD, Walter W. Scott, Jr, MD, Trevor C. Austin, Patrick J. Charland, Alan P. Kypson, MD, L. Wiley Nifong, MD, Kenneth Salleng, DVM, and W. Randolph Chitwood, Jr, MD

1266 **Role of Transvalvular Gradient in Outcome From Valve Replacement for Aortic Stenosis**
Arjuna Weerasinghe, FRCS, PhD, Merangani Yusuf, FRCS, Thanos Athanasiou, PhD, Alan Wood, FRCS, Patrick Magee, FRCS, and Rakesh Uppal, FRCS

1272 **Midterm Results of Aortic Valve Repair With the Pericardial Cusp Extension Technique in Rheumatic Valve Disease**
Nilgün Bozbuga, MD, Vedat Erentug, MD, Kaan Kirali, MD, Esat Akinci, MD, Ömer Isik, MD, and Cevat Yakut, MD

1277 **Long-Term Follow-Up After the Mini-Maze Procedure**
Zoltan A. Szalay, MD, Ali Civelek, MD, Thorsten Dill, MD, Wolf Peter Klövekorn, MD, Iram Kilb, MD, and Erwin P. Bauer, MD

1282 **Atrial Reduction Plasty Cox Maze Procedure: Extended Indications for Atrial Fibrillation Surgery**
Matthew A. Romano, MD, David S. Bach, MD, Francis D. Pagani, MD, PhD, Richard L. Prager, MD, G. Michael Deeb, MD, and Steven F. Bolling, MD

1288 **Indicators of Atrial Fibrillation Risk in Cardiac Surgery Patients on Prophylactic Amiodarone**
James S. Kalus, PharmD, C. Michael White, PharmD, Michael F. Caron, PharmD, Craig I. Coleman, PharmD, Hiroyoshi Takata, MD, and Jeffrey Kluger, MD

1293 **High-Frequency QRS Potentials as a Marker of Myocardial Dysfunction After Cardiac Surgery**
Shonosuke Matsushita, MD, PhD, Yuzuru Sakakibara, MD, PhD, Tomohiro Imazuru, MD, Mio Noma, MD, PhD, Yuji Hiramatsu, MD, PhD, Osamu Shigeta, MD, PhD, Tomoaki Jikuya, MD, PhD, and Toshio Mitsui, MD, PhD

1298 **Left Heart Bypass During Descending Thoracic Aortic Aneurysm Repair Does Not Reduce the Incidence of Paraplegia**
Joseph S. Coselli, MD, Scott A. LeMaire, MD, Lori D. Conklin, MD, and Gerald J. Adams, EdD

1304 **Thoracoabdominal Aortic Aneurysm Repair Through Redo Left-Sided Thoracotomy**
Nobuyoshi Kawaharada, MD, PhD, Kiyofumi Morishita, MD, PhD, Johji Fukada, MD, PhD, Yoshikazu Hachiro, MD, PhD, Kazuhiro Takahashi, MD, PhD, and Tomio Abe, MD, PhD

1309 **Management Strategies for Type A Dissection Complicated by Peripheral Vascular Malperfusion**
Leonard N. Girardi, MD, Karl H. Krieger, MD, Leonard Y. Lee, MD, Charles A. Mack, MD, Anthony J. Tortolani, MD, and O. Wayne Isom, MD

Invited Commentary
Nicholas T. Kouchoukos, MD

1315 **Cannulation of the Axillary Artery With a Side Graft Reduces Morbidity**
Joseph F. Sabik, MD, Hassan Nemeh, MD, Bruce W. Lytle, MD, Eugene H. Blackstone, MD, A. Marc Gillinov, MD, Jeevanantham Rajeswaran, MS, and Delos M. Cosgrove, MD

1321 **Longitudinal Change in Quality of Life and Impact on Survival After Left Ventricular Assist Device Implantation**
Kathleen L. Grady, PhD, RN, Peter M. Meyer, PhD, Diane Dressler, RN, MSN, Annette Mattea, RN, MSN, Suzanne Chillcott, RN, BSN, Alice Loo, RN, MSN, Connie White-Williams, MSN, RN, FNP, Barbara Todd, RN, MSN, Sophia Ormaza, RN, MSN, Annemarie Kaan, MCN, RN, Maria Rosa Costanzo, MD, and William Piccione, MD

1328 **Robotic Techniques Improve Quality of Life in Patients Undergoing Atrial Septal Defect Repair**
Jeffrey A. Morgan, MD, Joy C. Peacock, BS, Takushi Kohmoto, MD, Mauricio J. Garrido, MD, Bella M. Schanzer, MD, Aftab R. Kherani, MD, Deon W. Vigilance, MD, Faisal H. Cheema, MD, Sadi Kaplan, MD, Craig R. Smith, MD, Mehmet C. Oz, MD, and Michael Argenziano, MD

1334 **Improved Early Results With The Fontan Operation in Adults With Functional Single Ventricle**
Antonio R. Mott, MD, Timothy F. Feltes, MD, E. Dean McKenzie, MD, Dean B. Andropoulos, MD, Louis I. Bezold, MD, Arnold L. Fenrich, MD, Shannon L. Bedford, BSN, Howaida El-Said, MD, PhD, Stephen A. Stayer, MD, and Charles D. Fraser, Jr, MD

1341 **Extracorporeal Membrane Oxygenation Support of the Fontan and Bidirectional Glenn Circulations**
Karen L. Booth, MD, Stephen J. Roth, MD, Ravi R. Thiagarajan, MD, Melvin C. Almodovar, MD, Pedro J. del Nido, MD, and Peter C. Laussen, MBBS

1349 **Bidirectional Glenn Procedure Without Cardiopulmonary Bypass**
Jinfen Liu, MD, Yanan Lu, MD, Huiwen Chen, MD, Zhenying Shi, MD, Zhaokang Su, MD, and Wenxiang Ding, MD

1353 **Is Extended Arch Aortoplasty the Operation of Choice for Infant Aortic Coarctation? Results of 15 Years' Experience in 181 Patients**
Alfred E. Wood, FRCSI, Hossein Javadpour, FRCSI, Desmond Duff, FRCPI, Paul Oslizlok, FRCPI, and Kevin Walsh, FRCPI

1359 **Health Status, Functional Abilities, and Quality of Life After the Mustard or Senning Operation**
Philip Moons, PhDC, RN, Leentje De Bleser, MS, RN, Werner Budts, PhD, MD, Thierry Sluysmans, PhD, MD, Daniel De Wolf, PhD, MD, Martial Massin, PhD, MD, Marc Gewillig, PhD, MD, Agnes Pasquet, PhD, MD, Bert Suys, MD, and André Vliers, PhD, MD

Invited Commentary
Glen Van Arsdell, MD

1366 **Pacing Activity, Patient and Lead Survival Over 20 Years of Permanent Epicardial Pacing in Children**
John D. R. Thomson, MRCP, Michael E. Blackburn, MRCP, Carin Van Doorn, FRCS, Ann Nicholls, and Kevin G. Watterson, FRCS

1371 **Management of Deep Sternal Infection in Infants and Children With Advanced Pectoralis Major Muscle Flaps**
Kiick Sung, MD, Tae-Gook Jun, MD, Pyo Won Park, MD, Kay-Hyun Park, MD, Young Tak Lee, MD, and Ji-Hyuk Yang, MD

1376 **Acidosis-Induced Apoptosis in Human and Porcine Heart**
Hemant S. Thatte, PhD, Jin-Hwa Rhee, BA, Sofija E. Zagarins, BS, Patrick R. Treanor, CCP, Vladimir Birjiniuk, MD, Michael D. Crittenden, MD, and Shukri F. Khuri, MD

1384 **Improved Profile of Bad Phosphorylation and Caspase 3 Activation After Blood Versus Crystalloid Cardioplegia**
Jun Feng, MD, PhD, Cesario Bianchi, MD, PhD, Jianyi Li, MD, and Frank W. Sellke, MD

Invited Commentary
Hermann Aebert, MD

1391 **Replacing Potassium with Nicorandil in Cold St. Thomas' Hospital Cardioplegia Improves Preservation of Energetics and Function in Pig Hearts**
Tor Steensrud, MD, Dag Nordhaug, MD, Kjell V. Husnes, MD, Ebrahim Aghajani, MD, and Dag G. Sørlie, PhD, MD

1398 **Experimental Studies on Myocardial Protection With Intermittent Cross-Clamp Fibrillation: Additive Effect of the Sodium-Hydrogen Exchanger Inhibitor, Cariporide**
Masahiro Fujii, MD, Metin Avkiran, PhD, DSc, and David J Chambers, PhD

1408 **Glucose-Insulin-Potassium Solution Improves Left Ventricular Energetics in Chronic Ovine Diabetes**
Tharumenthiran Ramanathan, PhD, MBBS, Shin Morita, MD, Yifei Huang, MD, PhD, Kazuaki Shirota, MD, PhD, Takashi Nishimura, MD, PhD, Xing Zheng, MD, PhD, and Stephen N. Hunyor, MD, BS, MTM

NEW TECHNOLOGY

1415 **A New Tissue-Sealing Technique Using the LigaSure System for Nonanatomical Pulmonary Resection: Preliminary Results of Sutureless and Stapleless Thoracoscopic Surgery**
Norihisa Shigemura, MD, Akinori Akashi, MD, Tomoyuki Nakagiri, MD, Mitsunori Ohta, MD, and Hikaru Matsuda, MD

Invited Commentary
Eddie Hoover, MD

CASE REPORTS

1420 **Stenting of the Mainstem Bronchus in Children: A Word of Caution**
Winfield J. Wells, MD, Namath S. Hussain, BS, and John C. Wood, MD

1422 **Complete Tracheal Rupture After a Failed Suicide Attempt**
Victor S. Costache, MD, Claire Renaud, MD, Laurent Brouchet, MD, Tudor Toma, François Le Balle, MD, Jean Berjaud, MD, and Marcel Dahan, MD, PhD

1424 **A Novel Approach to the Management of Tracheoinnominate Artery Fistula**
Mario G. Gasparri, MD, Alfred C. Nicolosi, MD, and G. Hossein Almassi, MD

1426 **Peripheral Arterial Embolism Arising From Pulmonary Adenocarcinoma**
Jesus Loscertales, MD, PhD, Miguel Congregado, MD, PhD, Carlos Arenas, MD, PhD, Andres Arroyo, MD, Juan Carlos Giron, MD, Javier Ayarra, MD, PhD, and Rafael Jimenez-Merchan, MD, PhD

1428 **Transcontinental Transport of a Patient With an AbioMed BVS 5000 BVAD**
Evgenij V. Potapov, MD, Frank Merkle, ECCP, Andreas Güttel, RN, Miralem Pasic, MD, PhD, Michael Caleb, MD, Michael Kopitz, ECCP, and Roland Hetzer, MD, PhD

1431 **Temporary Assist Device for Postcardiotomy Cardiac Failure**
Antonis A. Pitsis, MD, FETCS, Petros Dardas, MD, FESC, Nikolaos Mezilis, MD, FESC, Nikolaos Nikoloudakis, MD, Gerasimos Filippatos, MD, FESC, and Daniel Burkhoff, MD, PhD

1433 **Minimally Invasive Direct Coronary Artery Bypass in a Cardiac Transplant Recipient With Allograft Vasculopathy**
Ivan Aleksic, MD, PhD, Jarowit A. Piotrowski, MD, Markus Kamler, MD, Ulf Herold, MD, and Heinz G. Jakob, MD, PhD

1435 **Late Cardiac Perforation Following Transcatheter Atrial Septal Defect Closure**
Ourania Preventza, MD, Sridhar Sampath-Kumar, MD, John Wasnick, MD, and Jeffrey P. Gold, MD

1437 **Minimal Invasive Endoscopic Resection of a Giant Left Atrial Appendage Aneurysm**
Bob Kiaii, MD, Nicolas Doll, MD, Michael Kuehl, MD, and Friedrich W. Mohr, MD, PhD

1439 **Endoventricular Pocket Repair of Type I Myocardial Rupture After Mitral Valve Replacement: A New Technique Using Pericardial Patch, Teflon Felt, and Bioglue**
Saqib Masroor, MD, John Schor, MD, Roger Carrillo, MD, and Donald B. Williams, MD

1441 **Left Ventricular–Coronary Sinus/Right Ventricular Fistula Late After Mitral Valve Replacement**
Luis Fernando López Almodóvar, MD, Juan José Rufilanchas, MD, Fernando Enríquez, MD, Luis Maroto, MD, Enrique Pérez de la Sota, MD, and José Cortina, MD

1443 **Immediate Structural Valve Deterioration of 27-mm Carpentier-Edwards Aortic Pericardial Bioprosthesis**
Arlen G. Fleisher, MD, Rocco J. Lafaro, MD, and Richard A. Moggio, MD

1445 **New Access to Facilitate Endovascular Repair of Descending Aorta Aneurysms**
Carmine Minale, MD, Pierluigi Cappiello, MD, Bruno Cimmino, MD, and Maurilio Di Natale, MD

1448 **Lethal Thrombus in the Carotid Artery During Operation for Acute Aortic Dissection With Cerebral Malperfusion**
Kazuhito Imanaka, MD, Motonobu Nishimura, MD, Ayumu Masuoka, MD, Masanori Ogiwara, MD, Masaaki Kato, MD, Haruhiko Asano, MD, and Shunei Kyo, MD

1449 **Left Ventricular Dysfunction After Pericardiectomy for Constrictive Pericarditis**
Richard S. Schofield, MD, Steven B. Shoemaker, MD, Eugene G. Ryerson, MD, Gary R. Cooper, MD, and William D. Spotnitz, MD

1451 **Successful Off-Pump Coronary Artery Bypass for Behcet's Disease**
Min-Ho Song, MD, PhD, Takashi Watanabe, MD, PhD, and Hajime Nakamura, MD, PhD

1454 **Late Myocardial Revascularization in Patients With Tetralogy of Fallot**
Marianne Coutu, MD, MS, Nancy C. Poirier, MD, Annie Dore, MD, Michel Carrier, MD, and Louis P. Perrault, MD, PhD

1456 **Reversal of Protein-Losing Enteropathy With Calcium Replacement in a Patient After Fontan Operation**
Soo-Jin Kim, MD, In-Seung Park, MD, Jin-Young Song, MD, Jae-Young Lee, MD, and Woo-Sup Shim, MD

1457 **Autologous Patch Angioplasty of the Left Main Coronary Artery in a Pediatric Patient: 7-Year Follow-Up**
Petros V. Anagnostopoulos, MD, Frank A. Pigula, MD, John L. Myers, MD, Lee B. Beerman, MD, Ralph D. Siewers, MD, and Sanjiv K. Gandhi, MD

1460 **A New Cryoprobe for Intraoperative Ablation of Atrial Fibrillation**
Nicolas Doll, MD, Ralf Meyer, PhD, Thomas Walther, MD, PhD, and Friedrich W. Mohr, MD, PhD

IMAGES IN CARDIOTHORACIC SURGERY

1463 **Ascending Aortic Aneurysm, Coarctation of the Aortic Isthmus and Hypoplastic Aortic Arch: Simultaneous Treatment Through Sternotomy**
Thierry P. Carrel, MD, and Pascal A. Berdat, MD

1464 **Dissociated Brain Blood Flow During Cardiac Surgery**
Vladimir Birjiniuk, MD, Patrick R. Treanor, CCP, Val Pochay, Michael D. Crittenden, MD, and Viken L. Babikian, MD

HOW TO DO IT

1465 **Simple Technique for Maximal Thoracic Muscle Harvest**
M. Blair Marshall, MD, Larry R. Kaiser, MD, and John C. Kucharczuk, MD

1467 **A Simplified Technique for Closing Thoracostomy Incisions**
Bernard G. Vasseur, MD

1469 **A Novel Technique for Creation of Adjustable Pneumoperitoneum**
M. Matej Puc, MD, Francis J. Podbielski, MD, and A. Alan Conlan, MD

1472 **Robotically Assisted Left Ventricular Epicardial Lead Implantation for Biventricular Pacing: The Posterior Approach**
Joseph J. Derose, Jr, MD, Scott Belsley, MD, Daniel G. Swistel, MD, Roxana Shaw, PA, and Robert C. Ashton, Jr, MD

REVIEWS

1475 **Evolving Options in the Management of Esophageal Perforation**
Clayton J. Brinster, BA, Sunil Singhal, MD, Lawrence Lee, BS, M. Blair Marshall, MD, Larry R. Kaiser, MD, and John C. Kucharczuk, MD

1484 **Photodynamic Therapy in Nonsmall Cell Lung Cancer: A Systematic Review**
Donna E. Maziak, MDCM, Barbara R. Markman, MA, Jean A. MacKay, MA, and William K. Evans, MD, and the Cancer Care Ontario Practice Guidelines Initiative Lung Cancer Disease Site Group

KEY REFERENCES

1492 **Truncus Arteriosus**
Edward L. Bove, MD

REPORT FROM THE WORKFORCE ON EVIDENCE-BASED SURGERY

1494 **The Society of Thoracic Surgeons Practice Guideline Series: Transmyocardial Laser Revascularization**
Charles R. Bridges, MD, ScD, Keith A. Horvath, MD, William C. Nugent, MD, David M. Shahian, MD, Constance K. Haan, MD, Richard J. Shemin, MD, Keith B. Allen, MD, and Fred H. Edwards, MD

CORRESPONDENCE

1503 **Aristotle, Esophagectomy, and Pulmonary Complications**
Francesco Leo, MD, Nicolas Venissac, MD, Razvan Palihovici, MD, Felice Lo Faso, MD, and Jérôme Mouroux, MD

1503 **Limited Resection of Non–Small Cell Lung Cancer: Should Brachytherapy Be Indicated in All Cases?**
Noriyoshi Sawabata, MD, Masayoshi Inoue, MD, Shin-ichi Takeda, MD, and Hajime Maeda, MD

Reply
Benedict D. T. Daly, MD, and Thomas A. DiPetrillo, MD

1504 **Preserving Infected Pacemaker Systems**
Raymond A. Dieter, Jr, MD

Reply
Makoto Yamada, MD, and Toshihiro Takaba, MD

1505 **Preservation of Saphenous Vein Endothelium**
Aurelio Chaux, MD

REVIEW OF RECENT BOOKS

1505 **Advanced Therapy of Cardiac Surgery, 2nd Edition**
Verdi J. DiSesa, MD

ANNOUNCEMENTS

A-44 **Information for Authors**

A-49 **Guidelines for Reviewers**

A-51 **Conditions for Publication Form**

A-53 **Events of Interest**

1178 **Internet Discussion Forum**

1215 **Requirements for Recertification/Maintenance of Certification in 2004**

1221 **Notice From the American Board of Thoracic Surgery Regarding Trainees and Candidates for Certification Who Are Called to Military Service Related to the War on Terrorism**

1234 **Notice from the American Board of Thoracic Surgery**

1340 **Southern Thoracic Surgical Association: Fifty-first Annual Meeting**

1352 **The Society of Thoracic Surgeons: Forty-first Annual Meeting**

1370 **Announcing Reduction in Cost of Color Illustrations Published in *The Annals***

A-59–62 **The Thoracic Surgery Foundation for Research and Education**

A-63 **Classified Advertisements**

A-69 **Index to Advertisers**

Number 5 May 2004

ANNOUNCEMENT

1507 **Editorial Board Changes**

ORIGINAL ARTICLES: CARDIOVASCULAR

1508 **Predictors of Health-Related Quality of Life After Coronary Artery Bypass Surgery**
John S. Rumsfeld, MD, PhD, P. Michael Ho, MD, David J. Magid, MD, MPH, Martin McCarthy, Jr, PhD, A. Laurie W. Shroyer, PhD, Samantha MaWhinney, ScD, Frederick L. Grover, MD, and Karl E. Hammermeister, MD

1514 **Does Preoperative Atrial Fibrillation Reduce Survival After Coronary Artery Bypass Grafting?**
Mohammed A. Quader, MD, Patrick M. McCarthy, MD, A. Marc Gillinov, MD, Joan M. Alster, MS, Delos M. Cosgrove III, MD, Bruce W. Lytle, MD, and Eugene H. Blackstone, MD

1525 **Surgical Treatment of Right Coronary Arteries With Anomalous Origin and Slit Ostium**
Raúl García-Rinaldi, MD, Javier Sosa, MD, Samuel Olmeda, ORT, Hernán Cruz, MD, Jorge Carballido, MD, and Cyd Quintana, MD

1530 **Rationale for Off-Pump Coronary Revascularization to Small Branches—Angiographic Study of 1,283 Anastomoses in 408 Patients**
Kaoru Matsuura, MD, Junjiro Kobayashi, MD, Osamu Tagusari, MD, Ko Bando, MD, Kazuo Niwaya, MD, Hiroyuki Nakajima, MD, Toshikatsu Yagihara, MD, and Soichiro Kitamura, MD

1535 **Exercise Therapy After Coronary Artery Bypass Graft Surgery: A Randomized Comparison of a High and Low Frequency Exercise Therapy Program**
Inge D. van der Peijl, MS, Thea P. M. Vliet Vlieland, MD, PhD, Michel I. M. Versteegh, MD, Judith J. Lok, PhD, Marten Munneke, MS, and Robert A. E. Dion, MD, PhD

1542 **First-Year Outcomes of Beating Heart Coronary Artery Bypass Grafting Using Proximal Mechanical Connectors**
Todd M. Dewey, MD, Katherine Crumrine, Morley A. Herbert, PhD, Allison Leonard, RN, Syma L. Prince, RN, Christina Worley, RN, James R. Edgerton, MD, Mitchell J. Magee, MD, and Michael J. Mack, MD

1550 **Skeletonized Radial Artery Graft With the St. Jude Medical Symmetry Bypass System (Aortic Connector System)**
Go Watanabe, MD, PhD, Hirofumi Takemura, MD, PhD, Shigeyuki Tomita, MD, PhD, Hiroshi Nagamine, MD, PhD, Hiroyuki Kamiya, MD, PhD, and Taro Kanamori, MD

Invited Commentary
Friedrich S. Eckstein, MD

1553 **Safety and Efficacy of Perioperative Cell Salvage and Autotransfusion After Coronary Artery Bypass Grafting: A Randomized Trial**
Gavin J. Murphy, MD, FRCS, Simon M. Allen, FRCS, Jonathon Unsworth-White, FRCS, C. Terence Lewis, FRCS, and Malcolm J. R. Dalrymple-Hay, PhD, FRCS

1560 **Off-Pump Coronary Artery Bypass Operation Does Not Increase Procoagulant and Fibrinolytic Activity: Preliminary Results**
Lars Englberger, MD, Franz F. Immer, MD, Friedrich S. Eckstein, MD, Pascal A. Berdat, MD, Andre Haeberli, PhD, and Thierry P. Carrel, MD

1567 **Do Off-Pump Techniques Reduce the Incidence of Postoperative Atrial Fibrillation in Elderly Patients Undergoing Coronary Artery Bypass Grafting?**
Thanos Athanasiou, MD, PhD, Omer Aziz, MBBS, Omar Mangoush, FRCS, Arjuna Weerasinghe, PhD, FRCS, Sharif Al-Ruzzeh, FRCS, Sanjay Purkayastha, MBBS, John Pepper, FRCS, Mohamed Amrani, FRCS, Brian Glenville, FRCS, and Roberto Casula, FECTS

1575 **Diseased Vein Grafts Express Elevated Inflammatory Cytokine Levels Compared With Atherosclerotic Coronary Arteries**
Jan Felix Christiansen, MD, Dirk Hartwig, MD, J. F. Matthias Bechtel, MD, Harald Klüter, MD, Hans- H. Sievers, MD, Uwe Schönbeck, PhD, and Claus Bartels, MD

1580 **Local Application of Rapamycin Inhibits Neointimal Hyperplasia in Experimental Vein Grafts**
Thomas Schachner, MD, Yping Zou, MD, Alexander Oberhuber, MD, Alexandar Tzankov, MD, Thomas Mairinger, MD, Günther Laufer, MD, and Johannes O. Bonatti, MD

1586 **Endoscopic Localization and Assessment of Coronary Arteries by 13 MHz Epicardial Ultrasound**
Ricardo P. J. Budde, MS, Rudy Meijer, Patricia F. A. Bakker, MD, PhD, Cornelius Borst, MD, PhD, and Paul F. Gründeman, MD, PhD

1593 **Effect of Prior Malignancy on Survival After Cardiac Surgery**
Wilhelm P. Mistiaen, MD, PhD, Philip Van Cauwelaert, MD, Philip Muylaert, MD, Floris Wuyts, PhD, Fernand Harrisson, PhD, and Hilde Bortier, MD, PhD

Invited Commentary
John G. Byrne, MD, and Marzia Leacche, MD

1598 **Edge-to-Edge (Alfieri) Mitral Repair: Results in Diverse Clinical Settings**
Sunil K. Bhudia, MD, Patrick M. McCarthy, MD, Nicholas G. Smedira, MD, Buu-Khanh Lam, MD, Jeevanantham Rajeswaran, MS, and Eugene H. Blackstone, MD

1607 **Biological or Mechanical Prostheses in Tricuspid Position? A Meta-Analysis of Intra-institutional Results**
Giulio Rizzoli, MD, FETCS, Igor Vendramin, MD, Georgios Nesseris, MD, Tomaso Bottio, MD, Cosimo Guglielmi, MD, and Laura Schiavon, DStat

1615 **High-Intensity Transient Signals Due to Prosthetic Valve Obstruction: Diagnostic and Therapeutic Implications**
Ryoichi Hiratsuka, MD, Shuji Fukunaga, MD, Eiki Tayama, MD, Kazuyoshi Takagi, MD, Koichi Arinaga, MD, Takahiro Shojima, MD, Hideki Teshima, MD, and Shigeaki Aoyagi, MD

1622 **Acute Type B Aortic Dissection in Elderly Patients: Clinical Features, Outcomes, and Simple Risk Stratification Rule**
Rajendra H. Mehta, MD, MS, Eduardo Bossone, MD, Arturo Evangelista, MD, Patrick T. O'Gara, MD, Dean E. Smith, PhD, Jeanna V. Cooper, MS, Jae K. Oh, MD, James L. Januzzi, MD, Stuart Hutchison, MD, Dan Gilon, MD, Linda A. Pape, MD, Christoph A. Nienaber, MD, Eric M. Isselbacher, MD, and Kim A. Eagle, MD, on behalf of the International Registry of Acute Aortic Dissection (IRAD) Investigators

Invited Commentary
Vincent L. Gott, MD

1630 **Neurocognitive Outcome After Retrograde Cerebral Perfusion**
Takeshi Miyairi, MD, PhD, Shinichi Takamoto, MD, Yutaka Kotsuka, MD, PhD, Atsuko Takeuchi, Katsuo Yamanaka, MD, PhD, and Hajime Sato, MD, PhD

Invited Commentary
David L. Reich, MD, and Suzan Uysal, PhD

1636 **Evaluation of Native Valve-Sparing Aortic Root Reconstruction With Direct Imaging—Reimplantation or Remodeling?**
Kojiro Furukawa, MD, Hitoshi Ohteki, MD, Zhi-Li Cao, MD, Yasushi Narita, CE, Yukio Okazaki, MD, Satoshi Ohtsubo, MD, and Tsuyoshi Itoh, MD

1642 **Initial Experience With Miniature Axial Flow Ventricular Assist Devices for Postcardiotomy Heart Failure**
Michael J. Jurmann, MD, Henryk Siniawski, MD, Michael Erb, MD, Thorsten Drews, MD, and Roland Hetzer, MD, PhD

1648 **Prolonged 24-Hour Subzero Preservation of Heterotopically Transplanted Rat Hearts Using Antifreeze Proteins Derived From Arctic Fish**
Gabriel Amir, MD, Boris Rubinsky, PhD, Liana Horowitz, MS, Liron Miller, Jonathan Leor, MD, Yigal Kassif, MD, David Mishaly, MD, Aram K. Smolinsky, MD, and Jacob Lavee, MD

1656 **Hemodilution Elevates Cerebral Blood Flow and Oxygen Metabolism During Cardiopulmonary Bypass in Piglets**
Takahiko Sakamoto, MD, Georg D. A. Nollert, MD, David Zurakowski, PhD, Janet Soul, MD, Lennart F. Duebener, MD, Jason Sperling, MD, Mitsugi Nagashima, MD, George Taylor, MD, Adre J. duPlessis, MD, and Richard A. Jonas, MD

Invited Commentary
John W Hammon, Jr, MD

1664 **Use of a pH-Stat Strategy During Retrograde Cerebral Perfusion Improves Cerebral Perfusion and Tissue Oxygenation**
Jian Ye, MD, Zhijun Li, MD, Yanmin Yang, MD, Luojia Yang, MD, Allan Turner, Michael Jackson, PhD, and Roxanne Deslauriers, PhD

Invited Commentary
Marek Ehrlich, MD

1671 **Continuous Measurement of Oxygen Consumption During Cardiopulmonary Bypass: Description of the Method and In Vivo Observations**
Jia Li, MD, PhD, Jacqueline Stokoe, CCP, Igor E. Konstantinov, MD, David Edgell, CCP, Michael M. H. Cheung, MRCP, Rajesh K. Kharbanda, MRCP, and Andrew N. Redington, FRCP

1678 **A New Poly-2-Methoxyethylacrylate-Coated Cardiopulmonary Bypass Circuit Possesses Superior Platelet Preservation and Inflammatory Suppression Efficacy**
Takeshi Ikuta, MD, Hiromichi Fujii, MD, Toshihiko Shibata, MD, Koji Hattori, MD, Hidekazu Hirai, MD, Hiroshi Kumano, MD, and Shigefumi Suehiro, MD

1684 **Myocyte Contractility With Caspase Inhibition and Simulated Hyperkalemic Cardioplegic Arrest**
Rupak Mukherjee, PhD, William M. Yarbrough, MD, Emily S. Reese, Jennifer S. Leiser, Jeffrey A. Sample, Joseph T. Mingoia, Amy E. Hardin, Robert E. Stroud, Julie E. McLean, Jennifer W. Hendrick, and Francis G. Spinale, MD, PhD

Invited Commentary
Y. Chandrashekhar, MD, and Jagat Narula, MD

1691 **Selective Timing for the Arterial Switch Operation**
Brian W. Duncan, MD, Nancy C. Poirier, MD, Roger B. B. Mee, CHB, FRACS, Jonathan J. Drummond-Webb, MD, Athar Qureshi, MD, C. Igor Mesia, MD, June A. Graney, RN, BSN, Cheryl L. Malek, RN, CPNP, and Larry A. Latson, MD

Invited Commentary
Francois Lacour-Gayet, MD

1698 **Preoperative Brain Injury in Newborns With Transposition of the Great Arteries**
Steven P. Miller, MD, Patrick S. McQuillen, MD, Daniel B. Vigneron, PhD, David V. Glidden, PhD, A. James Barkovich, MD, Donna M. Ferriero, MD, Shannon E. G. Hamrick, MD, Anthony Azakie, MD, and Tom R. Karl, MD

1707 **Contegra Bovine Jugular Vein Right Ventricle to Pulmonary Artery Conduit in Ross Procedure**
Manoj Purohit, MCh, Denise Kitchiner, FRCPCH, and Marco Pozzi, FECTS

1711 **Medtronic Freestyle Valve for Right Ventricular Reconstruction in Pediatric Ross Operations**
William M. Novick, MD, Darko Anic, MD, Alfredo Lora Solf, MD, Miguel Arboleda Torres, MD, Ivan Niño De Guzmán León, MD, Robert W. Reid, MD, and Thomas G. Di Sessa, MD

1717 **Repair of Complete Atrioventricular Septal Defects in Patients Weighing Less Than 5 kg**
Edvin Prifti, MD, PhD, Massimo Bonacchi, MD, Massimo Bernabei, MD, Adrian Crucean, MD, Bruno Murzi, MD, Fabio Bartolozzi, MD, Vincenzo Stefano Luisi, MD, Marzia Leacche, MD, Nadia S. Nathan, MD, and Vittorio Vanini, MD

1727 **Impact of Right Ventricle to Pulmonary Artery Conduit on Outcome of the Modified Norwood Procedure**
Anthony Azakie, MD, Daniel Martinez, MD, Anil Sapru, MD, Jeffrey Fineman, MD, David Teitel, MD, and Tom R. Karl, MD

1734 **Mycophenolic Mofetil Reduces the HLA Antibody Response of Children to Valved Allograft Implantation**
Robert E. Shaddy, MD, Thomas C. Fuller, PhD, Jeffrey B. Anderson, MD, Linda M. Lambert, RN, Maureen K. Brinkman, RN, Tracie Profaizer, BS, and John A. Hawkins, MD

Invited Commentary
David B. Ross, MD

ORIGINAL ARTICLES: GENERAL THORACIC

1740 **Long-Term Results of Operation for 420 Patients With Early Squamous Cell Esophageal Carcinoma Discovered by Screening**
Guo-Qing Wang, MD, Guang-Gen Jiao, MD, Fu-Bao Chang, MD, Wei-Hong Fang, MD, Jin-Xiang Song, MD, Ning Lu, MD, Dong-Mei Lin, MD, Yong-Qiang Xie, and Ling Yang, MD

1745 **Experience With Programmed Steroid Treatment With Thymectomy in Nonthymomatous Myasthenia Gravis**
Shunsuke Endo, MD, Tsutomu Yamaguchi, MD, Noriko Saito, MD, Shinichi Otani, MD, Tsuyoshi Hasegawa, MD, Yukio Sato, MD, and Yasunori Sohara, MD

1751 **Upregulated Hypoxia-Inducible Factor-1 DNA Binding Activity to the Vascular Endothelial Growth Factor-A Promoter Mediates Increased Vascular Permeability in Donor Lung Grafts**
Dietmar Abraham, PhD, Katharina Krenn, MD, Gernot Seebacher, MD, Patrick Paulus, MS, Walter Klepetko, MD, and Seyedhossein Aharinejad, MD

1756 **A Novel Technique for Localization and Excisional Biopsy of Small or Ill-Defined Pulmonary Lesions**
Thomas M. Daniel, MD, Talissa A. Altes, MD, Patrice K. Rehm, MD, Mark B. Williams, PhD, David R. Jones, MD, Alexander V. Stolin, MS, and Spencer B. Gay, MD

Invited Commentary
Hajime Saito, MD, Yoshihiro Minamiya, MD, and Jun-ichi Ogawa, MD

1763 **Endoscopic Ultrasound in Lung Cancer Patients With a Normal Mediastinum on Computed Tomography**
Michael B. Wallace, MD, James Ravenel, MD, Mark I. Block, MD, Mostafa Fraig, MD, Gerard Silvestri, MD, Stephan Wildi, MD, Nathan Schmulewitz, MD, Shyam Varadarajulu, MD, Stacey Roberts, MD, Brenda J. Hoffman, MD, Robert H. Hawes, MD, and Carolyn E. Reed, MD

1769 **Visceral Pleural Involvement in Nonsmall Cell Lung Cancer: Prognostic Significance**
Toshihiro Osaki, MD, PhD, Akira Nagashima, MD, PhD, Takashi Yoshimatsu, MD, PhD, Sosuke Yamada, MD, and Kosei Yasumoto, MD, PhD

Invited Commentary
Clifton F. Mountain, MD

1774 **Accuracy of Virtual Bronchoscopy to Detect Endobronchial Lesions**
Yves Lacasse, MD, MS, Simon Martel, MD, Amélie Hébert, MD, Guy Carrier, MD, and Bruno Raby, MD, MS

1781 **Bronchial Carcinoid Tumors: Nodal Status and Long-Term Survival After Resection**
Giuseppe Cardillo, MD, Francesco Sera, DStat, Marco Di Martino, MD, Paolo Graziano, MD, Roberto Giunti, MD, Luigi Carbone, MD, Francesco Facciolo, MD, and Massimo Martelli, MD

1786 **Prognostic Significance of Lymph Node Metastasis Found During Pulmonary Metastasectomy for Extrapulmonary Carcinoma**
Sina Ercan, MD, Francis C. Nichols III, MD, Victor F. Trastek, MD, Claude Deschamps, MD, Mark S. Allen, MD, Daniel L. Miller, MD, Cathy D. Schleck, BS, and Peter C. Pairolero, MD

1792 **Prospective Randomized Study Evaluating a Biodegradable Polymeric Sealant for Sealing Intraoperative Air Leaks That Occur During Pulmonary Resection**
Mark S. Allen, MD, Douglas E. Wood, MD, Ronald W. Hawkinson, MS, David H. Harpole, MD, Robert J. McKenna, MD, Garrett L. Walsh, MD, Eric Vallieres, MD, Daniel L. Miller, MD, Francis C. Nichols III, MD, W. Roy Smythe, MD, Robert D. Davis, MD, and the 3M™ Surgical Sealant Study Group

1802 **Lung Wedge Resection Improves Outcome in Stage I Primary Spontaneous Pneumothorax**
Martin Czerny, MD, Andreas Salat, MD, Tatjana Fleck, MD, Wolfgang Hofmann, MD, Daniel Zimpfer, MD, Franz Eckersberger, MD, Walter Klepetko, MD, Ernst Wolner, MD, and Michael-Rolf Mueller, MD

CASE REPORTS

1806 **Heart Transplantation in a Patient With Isolated Noncompaction of the Left Ventricular Myocardium**
Sotiris C. Stamou, MD, Edward A. Lefrak, MD, Freydoon C. Athari, MD, Nelson A. Burton, MD, and Paul S. Massimiano, MD

1808 **Monitoring Weaning From BIVAD Thoratec With Peak Oxygen Consumption**
Pascal H. Colson, MD, Frederique Ryckwaert, MD, Max Saussine, MD, Marc Ferrière, MD, and Bernard Albat, MD

1810 **Mitral Valve Repair in a 55-Year-Old Man With Left Lung Agenesis**
Ghassan S. Musleh, MBChB, MSc, FRCS, Pedro Fernandez, LMS, FRCA, Pankaj K. Jha, MBBS, MS, MRCS(Ed), and Ragheb Hasan, MBChB, MS, FRCS(CTh)

1811 **Transesophageal Echocardiography-Guided Chordal Replacement for Tricuspid Regurgitation**
Christophe Baufreton, MD, PhD, Jacques Laporte, MD, Jacques Langlais, MD, Michel Mehreb, MD, Patrice Binuani, MD, and Jean Louis de Brux, MD

1813 **Delayed Rupture of a Postinfarction Left Ventricular True Aneurysm**
Sinan Arsan, Serdar Akgun, Muhsin Turkmen, Nuri Kurtoglu, and Tekin Yildirim

1815 **A Man with Saphenous Vein Graft Aneurysms After Bypass Surgery**
Matthew L. Williams, MD, Edward Rampersaud, BS, and Walter G. Wolfe, MD

1817 **Fatal Complications After Use of the Symmetry Aortic Connector in Coronary Artery Bypass Surgery**
Jarmo Lahtinen, MD, Fausto Biancari, MD, PhD, Martti Mosorin, MD, Jouni Heikkinen, MD, Pekka Rainio, MD, PhD, Tatu S. Juvonen, MD, PhD, and Martti Lepojärvi, MD, PhD

1819 **Coronary Artery Bypass Grafting in an Immune Thrombocytopenic Purpura Patient Using Off-Pump Techniques**
Yoichi Inoue, MD, Remy C. H. Lim, MB, ChB, and Parma Nand, FRACS

1821 Surgical Treatment of Five Patients With Aortobronchial Fistula in the Aortic Arch
Junichiro Nishizawa, MD, PhD, Masahiko Matsumoto, MD, PhD, Takaaki Sugita, MD, PhD, Katsuhiko Matsuyama, MD, PhD, Yoshiyuki Tokuda, MD, Kazunori Yoshida, MD, and Takehiko Matsuo, MD

1823 Acute Respiratory Insufficiency and Giant Coronary Artery Aneurysm With Fistula
Carmelo Mignosa, MD, FETCS, Salvatore Agati, MD, Innocenzo Bianca, MD, Dario Salvo, MD, Giuseppe Pittella, MD, and Giuseppe Ciccarello, FEBCP

1825 Resolution of Pulmonary Arteriovenous Fistula by Redirection of Hepatic Venous Blood
Hajime Ichikawa, MD, Norihide Fukushima, MD, Masamichi Ono, MD, Tomoko Kita, MD, Toru Matsushita, MD, Yuji Miyamoto, MD, and Hikaru Matsuda, MD

1827 Simultaneous Repair of Pectus Excavatum and Congenital Heart Defect in Adults by Using the Convex Bar
Toru Okamura, MD, Yuzo Nagase, MD, Fujio Mitsui, MD, Masao Shibairi, MD, Kazuo Utsumi, MD, and Hiroshi Watanabe, MD

1829 Idiopathic Tracheal and Bronchial Stenosis in 2 Pediatric Patients
Emma Beddow, FRCS, Eng, Alexander J. Rice, MD, Mary N. Sheppard, FRCPath, and Peter Goldstraw, FRCS

1832 A Case of Primary Diffuse Tracheobronchial Amyloidosis
Hayssam Gibbaoui, MD, S. Abouchacra, MD, FRCS(C), and M. Yaman, MD, FRCS(C)

1834 Successful Thoracoscopic Debridement of Descending Necrotizing Mediastinitis
Noritaka Isowa, MD, Tetsu Yamada, MD, Takeshi Kijima, DDS, Kazuki Hasegawa, DDS, and Koji Chihara, MD

1837 Surgical Resection of Recurrent Bilateral Mediastinal Liposarcoma Through the Clamshell Approach
Yasuhiko Ohta, MD, Tomomi Murata, MD, Masaya Tamura, MD, Hideo Sato, MD, Hiroshi Kurumaya, MD, and Kazuyoshi Katayanagi, MD

1839 Plasmapheresis as Effective Treatment for Thyrotoxic Storm After Sleeve Pneumonectomy
Jurgen Petry, MD, Paul E. Y. Van Schil, MD, PhD, Pascale Abrams, MD, and Philippe G. Jorens, MD, PhD

1841 Primary Lung Tumor Mimicking Acute Type A Aortic Dissection
Uday Sonker, FRCS(I), FRCS(Ed), Dirk F. P. M. Peek, MD, Jacoba J. C. van Der Meij, MD, Robin H. Heijmen, MD, PhD, Cornelis A. Seldenrijk, MD, PhD, and Paul J. Knaepen, MD

1843 Klippel-Trenauney-Weber Syndrome Associated With Hemoptysis
Arup Kumar Ghosh, MS, FRCS, Sara F. Smithson, MD, Andrew Mumford, MRCP, Mathew Patteril, MD, and Khalid Amer, FRCS

1845 Pulmonary Inverted Schneiderian Papilloma
Stefano Margaritora, MD, Alfredo Cesario, MD, Domenico Galetta, MD, Venanzio Porziella, MD, Antonino Mulé, MD, and Pierluigi Granone, MD

IMAGES IN CARDIOTHORACIC SURGERY

1847 Smoking-Related Greater Vessel Stenoses and Bilateral Axillary Artery Revascularization
Christian R. Baeza, MD, Erik Beyer, MD, and Lars G. Svensson, MD, PhD

1848 An Unusual Ectopic Calcification in the Aorta
Toshihiro Fukui, MD, Shuichiro Takanashi, MD, Wahei Mihara, MD, Kazunori Ishikawa, MD, and Yasuyuki Hosoda, MD

HOW TO DO IT

1849 Creation of a Diaphragm Patch to Facilitate Placement of the AbioCor Implantable Replacement Heart
Robert D. Dowling, MD, Aziz S. Ghaly, MD, and Laman A. Gray, Jr, MD

1851 Intraabdominal Placement of a Novacor Ventricular Assist System by Using an Expanded Polytetrafluoroethylene Pouch
Goro Matsumiya, MD, Yuji Miyamoto, MD, Norihide Fukushima, MD, Osamu Monta, MD, Yoshiki Sawa, MD, and Hikaru Matsuda, MD

1854 Coronary Ostial Enlargement to Prevent Stenosis After Prosthetic Aortic Valve Replacement
Francesco Santini, MD, Samuele Pentiricci, MD, Antonio Messina, MD, and Alessandro Mazzucco, MD

1857 Overlapping Annuloplasty of the Mitral Valve in Children
René Prêtre, MD, Alexander Kadner, MD, Hitendu Dave, MD, Dominique Bettex, MD, and Marko I. Turina, MD

REVIEW

1860 **Thymic Tumors**
Frank C. Detterbeck, MD, and Alden M. Parsons, MD

OUR SURGICAL HERITAGE

1870 **The First Successful Repair of Postinfarction Ventricular Septal Defect: Influence of Good Fortune, Team Work, and an Inquisitive Mind**
John W. Hammon, MD, Jesse H. Meredith, MD, Timothy C. Pennell, MD, and A. Robert Cordell, MD

REPORT FROM THE WORKFORCE ON CLINICAL TRIALS

1874 **Mentoring Clinical Trials in Thoracic and Cardiovascular Surgery: A New Role for The Society of Thoracic Surgeons**
Henning A. Gaissert, MD, Alfred S. Casale, MD, Lawrence L. Creswell, MD, T. Bruce Ferguson, Jr, MD, David A. Fullerton, MD, Kemp H. Kernstine, MD, PhD, D. Michael McMullan, MD, W. Steves Ring, MD, and Joe B. Putnam, Jr, MD

CORRESPONDENCE

1876 **Increased Border-Zone Stress in Bulging Ventricular Aneurysm**
Benjamin M. Jackson, MD, Joseph H. Gorman III, MD, and Robert C. Gorman, MD

Reply
Thomas Bartel, MD

1877 **Is Routine Preoperative Mediastinoscopy Indicated in Clinical Stage I Non–Small-Cell Lung Cancer?**
C S Pramesh, MS, FRCS, Rajesh C. Mistry, MS, Ramakant K. Deshpande, MS, FICS, and Sanjay Sharma, MS, FICS

1878 **Video-Assisted Extended Thymectomy in Patients With Thymoma by Lifting the Sternum: Is It Safe?**
Axel Aubert, MD, Philippe Chaffanjon, MD, and Pierre-Yves Brichon, MD

Reply
Sadanori Takeo, MD, PhD

1878 **Do We Need More Trials of Postoperative Radiotherapy After Esophagectomy?**
C S Pramesh, MS, FRCS, Rajesh C. Mistry, MS, Ramakant K. Deshpande, MS, FICS, and Sanjay Sharma, MS, FICS

1879 **Efficacy of the "Box" Lesion Pattern in the Treatment of Atrial Fibrillation in the Presence of Mitral Valve Disease**
Gianluigi Bisleri, MD, Deon W. Vigilance, MD, Jeffrey A. Morgan, MD, and Michael Argenziano, MD

Reply
Renato A. K. Kalil, MD, PhD, and Gustavo G. Lima, MD, PhD

CORRECTION

1880 **Rangappa S, Fen C, Lee EH, Bongso A, Wei ESK. Transformation of adult mesenchymal stem cells isolated from the fatty tissue into cardiomyocytes. Ann Thorac Surg 2003;75:775–9.**

ANNOUNCEMENTS

A-40 **Information for Authors**

A-45 **Guidelines for Reviewers**

A-47 **Conditions for Publication Form**

A-49 **Events of Interest**

1513 **Internet Discussion Forum**

1559 **Requirements for Recertification/ Maintenance of Certification in 2004**

1585 **Notice From the American Board of Thoracic Surgery Regarding Trainees and Candidates for Certification Who Are Called to Military Service Related to the War on Terrorism**

1621 **Notice from the American Board of Thoracic Surgery**

1641 **The Thoracic Surgery Foundation for Research and Education**

1677 **Southern Thoracic Surgical Association: Fifty-first Annual Meeting**

1716 **The Society of Thoracic Surgeons: Forty-first Annual Meeting**

1744 **Announcing Reduction in Cost of Color Illustrations Published in *The Annals***

A-53 **Information About Membership in The Society of Thoracic Surgeons**

A-54 **2005 Annual Meeting of The Society of Thoracic Surgeons, Call for Abstracts**

A-55 **Classified Advertisements**

A-65 **Index to Advertisers**

Number 6 June 2004

EDITORIAL

1881 **The Conduction Tissues in Congenitally Corrected Transposition**
Robert H. Anderson, MD, FRCPath

ORIGINAL ARTICLES: GENERAL THORACIC

1883 **Neuroendocrine and Biologic Features of Primary Tumors and Tissue in Pulmonary Large Cell Carcinomas**
Alexandre M. Ab' Saber, MD, Ledo Mazzei Massoni Neto, MD, Cristina P. Bianchi, MD, Bruno B. Ctenas, MD, Edwin R. Parra, MD, Esmeralda M. Eher, MD, João Carlos Pereira, MD, Teresa Takagaki, MD, PhD, Nise H. Yamaguchi, MD, PhD, and Vera L. Capelozzi, MD, PhD

1891 **Pulmonary Large Cell Neuroendocrine Carcinoma Demonstrates High Proliferative Activity**
Akira Iyoda, MD, Kenzo Hiroshima, MD, Yasumitsu Moriya, MD, Teruaki Mizobuchi, MD, Mizuto Otsuji, MD, Yasuo Sekine, MD, Kiyoshi Shibuya, MD, Toshihiko Iizasa, MD, Yukio Saitoh, MD, and Takehiko Fujisawa, MD

Invited Commentary
Joseph B. Shrager, MD

1896 **Preoperative Pulmonary Function as a Prognostic Factor for Stage I Non–Small Cell Lung Carcinoma**
Toshihiko Iizasa, MD, Makoto Suzuki, MD, Kazuhiro Yasufuku, MD, Akira Iyoda, MD, Mizuto Otsuji, MD, Shigetoshi Yoshida, MD, Yasuo Sekine, MD, Kiyoshi Shibuya, MD, Yukio Saitoh, MD, Kenzo Hiroshima, MD, and Takehiko Fujisawa, MD

Invited Commentary
Thomas A. D'Amico, MD

1904 **Minithoracotomy Combined With Mechanically Stapled Bronchial and Vascular Ligation for Anatomical Lung Resection**
Michael F. Szwerc, MD, Rodney J. Landreneau, MD, Ricardo S. Santos, MD, Robert J. Keenan, MD, and Gordon F. Murray, MD

1911 **Video-Assisted Thoracic Surgery for Pure Ground-Glass Opacities 2 cm or Less in Diameter**
Shunsuke Yamada, MD, and Tadasu Kohno, MD

1916 **Percutaneous Venovenous Perfusion-Induced Systemic Hyperthermia for Lung Cancer: A Phase I Safety Study**
Joseph B. Zwischenberger, MD, Roger A. Vertrees, PhD, Eric A. Bedell, MD, Christopher K. McQuitty, MD, Jill M. Chernin, RN, and Lee C. Woodson, MD, PhD

1926 **Evolution of Surgical Outcomes for Nonsmall Cell Lung Cancer: Time Trends in 1,465 Consecutive Patients Undergoing Complete Resection**
Morihito Okada, MD, PhD, Wataru Nishio, MD, PhD, Toshihiko Sakamoto, MD, PhD, Kazuya Uchino, MD, Tsuyoshi Yuki, MD, Akio Nakagawa, MD, and Noriaki Tsubota, MD, PhD

Invited Commentary
P. Van Schil, MD

1932 **Comparison of Water Seal and Suction After Pulmonary Lobectomy: A Prospective, Randomized Trial**
Alessandro Brunelli, MD, Marco Monteverde, MD, Alessandro Borri, MD, Michele Salati, MD, Rita D. Marasco, MD, Majed Al Refai, MD, and Aroldo Fianchini, MD

Invited Commentary
Robert James Cerfolio, MD, FACS

1938 **Intratracheal Poly (ADP) Ribose Synthetase Inhibition Ameliorates Lung Ischemia Reperfusion Injury**
Alexander S. Farivar, MD, Steven M. Woolley, MRCS, Charles H. Fraga, MS, Robert Thomas, BS, Andrew L. Salzman, MD, Csaba Szabo, MD, PhD, and Michael S. Mulligan, MD

1944 **Alteration of Cellular Electrophysiologic Properties in Porcine Pulmonary Microcirculation After Preservation With University of Wisconsin and Euro-Collins Solutions**
Rong-Zhen Zhang, MD, Qin Yang, MD, PhD, Anthony P. C. Yim, MD, and Guo-Wei He, MD, PhD

1951 **Acute Postoperative Pain in Lung Transplant Recipients**
Chloé Richard, BS, François Girard, MD, FRCPC, Pasquale Ferraro, MD, FRCSC, Philippe Chouinard, MD, FRCPC, Daniel Boudreault, MD, FRCPC, Monique Ruel, RN, Manon Choinière, PhD, Charles Poirier, MD, FRCPC, and Dominique C. Girard, MD, FRCPC

Invited Commentary
George V. Letsou, MD

1956 **Foramen of Morgagni Hernia: Changes in Diagnosis and Treatment**
Peter C. Minneci, MD, Katherine J. Deans, MD, Peter Kim, MD, and Douglas J. Mathisen, MD

ORIGINAL ARTICLES: CARDIOVASCULAR

1960 **Are Unaudited Records From an Outcomes Registry Database Accurate?**
Morley A. Herbert, PhD, Syma L. Prince, RN, BSN, Janet L. Williams, BA, Mitchell J. Magee, MD, and Michael J. Mack, MD

Invited Commentary
Gary L. Grunkemeier, PhD

1966 **Multivariable Prediction of In-Hospital Mortality Associated With Aortic and Mitral Valve Surgery in Northern New England**
Edward R. Nowicki, MD, Nancy J. O. Birkmeyer, PhD, Ronald W. Weintraub, MD, Bruce J. Leavitt, MD, John H. Sanders, MD, Lawrence J. Dacey, MD, Robert A. Clough, MD, Reed D. Quinn, MD, David C. Charlesworth, MD, Donato A. Sisto, MD, Paul N. Uhlig, MD, Elaine M. Olmstead, BA, and Gerald T. O'Connor, PhD, DSc, for the Northern New England Cardiovascular Disease Study Group and the Center for Evaluative Clinical Sciences, Dartmouth Medical School

1978 **Minimally Invasive Mitral Valve Repair Using the da Vinci Robotic System**
Antone J. Tatooles, MD, Patroklos S. Pappas, MD, Paul J. Gordon, MD, and Mark S. Slaughter, MD

1985 **Mitral Valve Repair With the Colvin-Galloway Future Band**
Roland Fasol, MD, Johann Meinhart, PhD, Manfred Deutsch, MD, and Thomas Binder, MD

Invited Commentary
Sergio Almeida de Oliveira, MD

1989 **Mitral Valve Surgery for Chronic Ischemic Mitral Regurgitation**
Antonio M. Calafiore, MD, Michele Di Mauro, MD, Sabina Gallina, MD, Gabriele Di Giammarco, MD, Angela L. Iacò, MD, Giovanni Teodori, MD, and Isabella Tavarozzi, MD

1998 **Is a Bicuspid Aortic Valve a Risk Factor for Adverse Outcome After an Autograft Procedure?**
Ad J. J. C. Bogers, MD, PhD, Arie-Pieter Kappetein, MD, PhD, Jolien W. Roos-Hesselink, MD, and Johanna J.M. Takkenberg, MD, PhD

2004 **Promoting Angiogenesis Protects Severely Hypertrophied Hearts From Ischemic Injury**
Ingeborg Friehs, MD, Adrian M. Moran, MD, Christof Stamm, MD, Yeong-Hoon Choi, MD, Douglas B. Cowan, PhD, Francis X. McGowan, MD, and Pedro J. del Nido, MD

Invited Commentary
Mladen J. Kocica, MD

2012 **Acute Dissection of the Descending Aorta: Noncommunicating Versus Communicating Forms**
Monvadi B. Srichai, MD, Michael L. Lieber, MS, Bruce W. Lytle, MD, Jane M. Kasper, RN, and Richard D. White, MD

Invited Commentary
Robert A. E. Dion, MD

2021 **Separate Grafts or En Bloc Anastomosis for Arch Vessels Reimplantation to the Aortic Arch**
Marco Di Eusanio, MD, PhD, Marc A. A. M. Schepens, MD, PhD, Wim J. Morshuis, MD, PhD, Karl M. Dossche, MD, PhD, Teruhisa Kazui, MD, PhD, Kazuhiro Ohkura, MD, Naoki Washiyama, MD, PhD, Roberto Di Bartolomeo, MD, Davide Pacini, MD, and Angelo Pierangeli, MD

2029 **Circulatory Arrest for Repair of Postcoarctation Site Aneurysm**
Nicholas Kang, MBBS, FRACS, Andrew J. B. Clarke, MBBS, FRACS, Ian A. Nicholson, MBBS, FRACS, and Richard B. Chard, MBBS, FRACS

2034 **Tau Protein in the Cerebrospinal Fluid is a Marker of Brain Injury After Aortic Surgery**
Norihiko Shiiya, MD, PhD, Takashi Kunihara, MD, PhD, Tsukasa Miyatake, MD, PhD, Kenji Matsuzaki, MD, and Keishu Yasuda, MD, PhD

2039 **Bilateral Versus Single Internal Thoracic Artery Grafting in Oral-Treated Diabetic Subsets: Comparative Seven-Year Outcome Analysis**
Oren Lev-Ran, MD, Rony Braunstein, PhD, Nahum Nesher, MD, Yanai Ben-Gal, MD, Gil Bolotin, MD, and Gideon Uretzky, MD

2046 **Skeletonization of Gastroepiploic Artery Graft in Off-Pump Coronary Artery Bypass Grafting: Early Clinical and Angiographic Assessment**
Hiroyuki Kamiya, MD, Go Watanabe, MD, Hirofumi Takemura, MD, Shigeyuki Tomita, MD, Hiroshi Nagamine, MD, and Taro Kanamori, MD

2051 **Beating Versus Arrested Heart Coronary Revascularization: Evaluation by Cardiac Troponin I Release**
Kifah Alwan, MD, PhD, Pierre-Emmanuel Falcoz, MD, Jihad Alwan, MD, Walid Mouawad, MD, Georges Oujaimi, MD, Sidney Chocron, MD, PhD, and Joseph-Philippe Etievent, MD

2056 **Usefulness of Preoperative Intraaortic Balloon Pump Therapy During Off-Pump Coronary Artery Bypass Grafting in High-Risk Patients**
Tomoaki Suzuki, MD, Manabu Okabe, MD, PhD, Mitsuteru Handa, MD, Fuyuhiko Yasuda, MD, PhD, and Yoichiro Miyake, MD

Invited Commentary
Jan T. Christenson, MD, PhD

2061 **Internal Thoracic Artery Malperfusion: Fast Decision for an Additional Vein Graft Has Impact on Patient Outcome**
Parwis Massoudy, MD, Yi-Young Kim, MD, Murat Cetin, MD, Matthias Thielmann, MD, Ulf Herold, MD, Markus Kamler, MD, and Heinz Jakob, MD

Invited Commentary
Thoralf M. Sundt III, MD

2066 **Oxygen Pressure Measurement During Grip Exercise Reveals Exercise Intolerance After Radial Harvest**
Susumu Manabe, MD, Noriyuki Tabuchi, MD, PhD, Masaaki Toyama, MD, Tomoya Yoshizaki, MD, Masanori Kato, MD, Haisong Wu, MD, PhD, Mitsuhisa Kotani, MD, and Makoto Sunamori, MD, PhD

2071 **Digital Blood Flow After Radial Artery Harvest for Coronary Artery Bypass Grafting**
Hyun-Sung Lee, MD, Byung-Chul Chang, MD, and Youn Jeong Heo, RN

Invited Commentary
Keith B. Allen, MD

2076 **Endoscopic Vein Harvest: Advantages and Limitations**
Pramod Bonde, FRCSI, Alastair N. J. Graham, FRCS(CTh), and Simon W. MacGowan, FRCSI(CTh)

2083 **New-Onset Sustained Ventricular Tachycardia and Fibrillation Early After Cardiac Operations**
John A. Yeung-Lai-Wah, MBChB, Anzhen Qi, MD, Elizabeth McNeill, MB ChB, James G. Abel, MD, Stanley Tung, MD, Karin H. Humphries, DS, and Charles R. Kerr, MD

2089 **Randomized Study of Surgery for Patients With Permanent Atrial Fibrillation as a Result of Mitral Valve Disease**
Gustavo Glotz de Lima, MD, PhD, Renato A. K. Kalil, MD, PhD, Tiago L. L. Leiria, MD, Domingos M. Hatem, MD, MS, Claudio L. Kruse, MD, Rogério Abrahão, MD, João R. M. Sant'anna, MD, PhD, Paulo R. Prates, MD, and Ivo A. Nesralla, MD, PhD

Invited Commentary
Hans Gerd Fieguth, MD

2096 **Changing Donor and Recipient Demographics in a Heart Transplantation Program: Influence on Early Outcome**
Neville A. G. Solomon, MCh, James R. McGiven, FRACS, Peter M. Alison, FRACS, Peter N. Ruygrok, FRACP, David A. Haydock, FRACS, H. Arthur Coverdale, FRACP, and Teena M. West, MS

2103 **Preclinical Readiness Testing of the Arrow International CorAide Left Ventricular Assist System**
Kazuyoshi Doi, MD, Leonard A. R. Golding, MD, Alex L. Massiello, MEBME, Michael W. Kopcak, Jr, BA, Renee L. Gerhart, BSBME, Soren Schenk, MD, Masahiro Inoue, MD, PhD, Yoshio Ootaki, MD, PhD, and Kiyotaka Fukamachi, MD, PhD

2111 **Diaphragmatic Hernias Associated With Ventricular Assist Devices and Heart Transplantation**
Subhasis Chatterjee, MD, Noel N. Williams, MD, Mary Lou Ohara, MSN, Carol Twomey, CRNP, Jon B. Morris, MD, and Michael A. Acker, MD

2115 **Septal Reshaping for Exclusion of Anteroseptal Dyskinetic or Akinetic Areas**
Antonio M. Calafiore, MD, Michele Di Mauro, MD, Gabriele Di Giammarco, MD, Sabina Gallina, MD, Angela L. Iacò, MD, Marco Contini, MD, Antonio Bivona, MD, and Stefano Volpe, MD

2122 **Local Myocardial Overexpression of Growth Hormone Attenuates Postinfarction Remodeling and Preserves Cardiac Function**
Vasant Jayasankar, MD, Lawrence T. Bish, BA, Timothy J. Pirolli, Mark F. Berry, MD, Jeffrey Burdick, BS, and Y. Joseph Woo, MD

Invited Commentary
Joren C. Madsen, MD, DPhil, and Roger J. Hajjar, MD

2130 **Changes in Mesenteric Vascular Reactivity and Inflammatory Response After Cardiopulmonary Bypass in a Rat Model**
Fabien Doguet, MD, Pierre-Yves Litzler, MD, Fabienne Tamion, MD, PhD, Vincent Richard, PhD, Marie-France Hellot, PhD, Christian Thuillez, MD, PhD, Alfred Tabley, MD, François Bouchart, MD, and Jean Paul Bessou, MD

Invited Commentary
Sunil Ohri, MD, FRCS

2138 **Comparison of Low-Flow Cardiopulmonary Bypass and Circulatory Arrest on Brain Oxygen and Metabolism**
Steven Schultz, MD, Jennifer Creed, BA, Gregory Schears, MD, Tatiana Zaitseva, PhD, William Greeley, MD, David F. Wilson, PhD, and Anna Pastuszko, PhD

2144 **Surgical Patch Closure of Atrial Septal Defects**
Richard A. Hopkins, MD, Arthur A. Bert, MD, Bryan Buchholz, CCP, MS, Kathleen Guarino, BSN, PNP, and Merry Meyers, MS

Invited Commentary
Volkmar Falk, MD, PhD, and Thomas Walther, MD, PhD

2151 **Right Ventricular Outflow Tract Reconstruction With the Contegra Bovine Jugular Vein Conduit: A Word of Caution**
Andreas R. Tiete, MD, Jörg S. Sachweh, MD, Ulrich Roemer, MD, Rainer Kozlik-Feldmann, MD, Bruno Reichart, MD, and Sabine H. Daebritz, MD

2157 **Left Atrioventricular Valve Regurgitation After Repair of Incomplete Atrioventricular Septal Defect**
Toshifumi Murashita, MD, PhD, Takehiro Kubota, MD, Jun-ichi Oba, MD, PhD, Toshihide Aoki, MD, PhD, Jun Matano, MD, and Keishu Yasuda, MD, PhD

2163 **Congenitally Corrected Transposition: Size of the Pulmonary Trunk and Septal Malalignment**
Amir-Reza Hosseinpour, MD, FRCS(C-Th), Karen P. McCarthy, BS, Massimo Griselli, MD, FRCS, Babulal Sethia, FRCS, and Siew Yen Ho, PhD, FRCP

2167 **Posterior Annular Plication: Tricuspid Valve Repair in Ebstein's Anomaly**
Camille L. Hancock Friesen, MD, Robert Chen, MD, Jonathan G. Howlett, MD, and David B. Ross, MD

NEW TECHNOLOGY

2172 **Clinical Experience With the Mini-Extracorporeal Circulation System: An Evolution or a Revolution?**
Jean-Paul Remadi, MD, Paul Marticho, MD, Irina Butoi, MD, Zava Rakotoarivelo, MD, Faouzi Trojette, MD, Amar Benamar, MD, Sadek Beloucif, MD, Dominique Foure, MD, and Henri J. Poulain, MD

Invited Commentary
William L. Holman, MD

2177 **Bovine Glue (BioGlue) is Catabolized by Enzymatic Reaction in the Vascular Dog Model**
Yves Van Belleghem, MD, Ramses G. Forsyth, MD, Kishan Narine, MD, Annelies Moerman, MD, Yves Taeymans, MD, PhD, and Guido J. Van Nooten, MD, PhD

Invited Commentary
Ernst Wolner, MD, and Marek P. Ehrlich, MD

CASE REPORTS

2183 **Single-Stage Repair of Tetralogy of Fallot With Pseudoaneurysm: A Unique Approach**
Sreekanthan Sundararaghavan, MD, Omar Khalid, MD, William A. Suarez, MD, and Edward L. Bove, MD

2184 **A Cluster of Cases of Aspergillus Endocarditis After Cardiac Surgery**
Ismaïl El-Hamamsy, MD, Nicolas Dürrleman, MD, Louis-Mathieu Stevens, MD, Raymond Cartier, MD, Michel Pellerin, MD, Louis P. Perrault, MD, PhD, and Michel Carrier, MD

2186 **Off-Pump Coronary Artery Bypass in Patients with Takayasu's Disease**
Atsushi Yamaguchi, MD, PhD, Hidehito Endo, MD, Hideo Adachi, MD, PhD, Koji Kawahito, MD, PhD, and Takashi Ino, MD, PhD

2189 **Urgent Off-Pump Coronary Artery Bypass Grafting in a Patient With HIV**
Mitsuhiro Kawata, MD, Kazuhiko Higuchi, MD, Kenji Koseni, MD, and Hiroyuki Tsukihara, MD

2190 **Two Cases of Rounded Atelectasis Presenting After Coronary Artery Surgery**
Arun K. Srinivasan, MD, John A. Holemans, FRCR, and Richard D. Page, FRCS(CTh)

2192 **Marfan Syndrome as a Predisposing Factor for Traumatic Aortic Insufficiency**
Francesco Onorati, MD, Luca Salvatore De Santo, MD, Antonio Carozza, MD, Marisa De Feo, MD, Attilio Renzulli, MD, FECTS, and Maurizio Cotrufo, FECTS

2194 **Successful Treatment of Ascending Aortic Graft Infection After Operation for Acute Aortic Dissection With Peripheral Malperfusion**
Masaaki Kato, MD, Kazuhito Imanaka, MD, Shunei Kyo, MD, Hiroshi Ohuchi, MD, Haruhiko Asano, MD, and Shinichi Takamoto, MD

2196 **Successful Repair of Aberrant Right Subclavian Artery Aneurysm Combined With Bicuspid Aortic Valve Through a Median Sternotomy**
Tetsuya Kono, MD, Hiroto Kitahara, MD, Takayuki Watanabe, MD, Tamaki Takano, MD, Masayuki Sakaguchi, MD, and Jun Amano, MD

2197 **Giant Anastomotic Pseudoaneurysm Complicating Aortic Xenograft Replacement**
Nils Kucher, MD, Beat Kipfer, MD, Christian Seiler, MD, FACC, FESC, and Yves Allemann, MD, FESC

2199 **Simplified Thoracic Aortic Aneurysm Repair**
Marco Pocar, MD, PhD, Pino Fundarò, MD, and Francesco Donatelli, MD

2201 **Human Papillomavirus and Squamous Cell Carcinoma in a Solitary Tracheal Papilloma**
Chung-Wah Lam, MD, Alan Ronald Talbot, MD, Kun-Tu Yeh, MD, Sing-Chun Lin, Chia-En Hsieh, and Hsin-Yuan Fang, MD

2203 **Extralobar Pulmonary Sequestration Simulates Posterior Neurogenic Tumor**
Ryszard W. Lupinski, MD, PhD, Thirugnanam Agasthian, MMed, FRCS, Chong Hee Lim, FRCS, FAMS, and Yeow Leng Chua, MMed, FRCS

2204 **Pulsating Thoracic Tumor Caused by Extragenital Endometriosis in a Patient With Noonan Syndrome**
Theresa Seeliger, MD, Jens-Uwe Voigt, MD, Helmut Singer, MD, Werner G. Daniel, MD, and Holger Rupprecht, MD

2206 **Primary Mediastinal Hyalinizing Spindle Cell Tumor With Giant Rosettes**
Domenico Galetta, MD, Alfredo Cesario, MD, Stefano Margaritora, MD, and Pierluigi Granone, MD

2209 **Noninvasive Thymoma in the Middle Mediastinum**
Masato Kanzaki, MD, PhD, Kunihiro Oyama, MD, PhD, Toyohide Ikeda, MD, PhD, Tamami Yoshida, MD, Masahide Murasugi, MD, PhD, and Takamasa Onuki, MD, PhD

2210 **Resection of Primary Pleural Pedunculate Hemangiopericytoma**
Makoto Takahama, MD, PhD, Keiji Kushibe, MD, Michitaka Kimura, MD, Takeshi Kawaguchi, MD, Yuko Nishimoto, MD, and Shigeki Taniguchi, MD

2213 **Management of Newborn Lymphangiectasia and Chylothorax After Cardiac Surgery With Octreotide Infusion**
James Tibballs, MD, Rodrigo Soto, MD, and Tara Bharucha, MB Bchir

2215 **Octreotide and Low-Fat Breast Milk in Postoperative Chylothorax**
Mohamed A. Hamdan, MD, and Mary Lou Gaeta, MD

2217 **Diagnosis and Management of Aortoesophageal Fistula Caused by a Foreign Body**
Giuseppe S. Sica, MD, PhD, Veronica Djapardy, MD, Stephen Westaby, MD, PhD, and Nicholas D. Maynard, MS, FRCS

2218 **Chronic Retained Foreign Bodies in the Esophagus**
Rishendran R. Naidoo, MBChb, and Anunathan A. Reddi, FCS Cardio (SA)

IMAGES IN CARDIOTHORACIC SURGERY

2221 **Stenosed Mammary Artery Graft Depicted by Multidetector Computed Tomography**
Min-Ho Song, MD, Makihiro Ishida, BS, Takashi Iyoda, BS, and Hideki Goto, BS

2222 **Is Echocardiography Alone Diagnostic of a Cardiac Mass Before Surgical Intervention?**
I-Hui Wu, MD, Wen-Yih I. Tseng, MD, PhD, and Ing-Sh Chiu, MD, PhD

HOW TO DO IT

2223 **Ross-Konno Procedure in Neonates: Report Of Three Patients**
François Lacour-Gayet, MD, Henning Sauer, MD, Kalliopi Ntalakoura, MD, Andreas Müller, MD, Vit Razek, MD, Jochen Weil, MD, and Christoph Haun, MD

2226 **Modified Cavoatriotomy for Combined PAPVC Repair and Maze Procedure**
Hiroyuki Nakajima, MD, Hideki Uemura, MD, Junjiro Kobayashi, MD, Koji Kagisaki, MD, Toshikatsu Yagihara, MD, and Soichiro Kitamura, MD

2228 **Ventricular Septal Defect Closure in Tetralogy of Fallot: The Aortic Rule**
Pierre Wauthy, MD, Hélène Demanet, MD, Jacques P. Goldstein, PhD, and Frank E. Deuvaert, MD

2230 **Complete Port-Accessed Lobectomy by the Muscle-Sparing Method**
Yoshinori Doki, MD, Katsuyuki Ichiki, MD, Motoharu Tsuda, MD, Masayoshi Toge, MD, Takuro Misaki, MD, Katsuo Usuda, MD, and Shigeki Sugiyama, MD

REVIEWS

2232 **Cardiac Surgery Risk Modeling for Mortality: A Review of Current Practice and Suggestions for Improvement**
Rumana Z. Omar, PhD, Gareth Ambler, PhD, Patrick Royston, DSc, Joseph Eliahoo, MS, and Kenneth M Taylor, FRCS

2238 **Should the Internal Thoracic Artery Be Skeletonized?**
Thanos Athanasiou, MD, PhD, Mary-Clare Crossman, MRCS, George Asimakopoulos, FRCS, Ashok Cherian, MD, Arjuna Weerasinghe, FRCS, Brian Glenville, FRCS, and Roberto Casula, FECTS

KEY REFERENCES

2247 **Immunosuppression and Transplant Immunology**
Joren C. Madsen, MD, DPhil, and James S. Allan, MD

OUR SURGICAL HERITAGE

2250 **Atrial Switch Operation: Past, Present, and Future**
Igor E. Konstantinov, MD, Vladimir V. Alexi-Meskishvili, MD, PhD, William G. Williams, MD, Robert M. Freedom, MD, and Richard Van Praagh, MD

CORRESPONDENCE

2259 **Early and Late Arrhythmias in Patients in Preoperative Sinus Rhythm After Superior Septal Approach**
Yoshio Misawa, MD, and Yuichiro Kaminishi, MD

Reply
Mario Gaudino, MD, and Gianfederico Possati, MD

2259 **Shallow Stitch Close to the Rim of the Ventricular Septal Defect After Pulmonary Artery Banding**
Takaaki Sugita, MD, Masahiko Matsumoto, MD, Jyunichirou Nishizawa, MD, Katsuhiko Matsuyama, MD, Yujirou Kawanishi, MD, and Kyoukun Uehara, MD

Reply
Toyoki Fukuda, MD, and Ichiro Kashima, MD

2260 **Early Blalock-Taussig Shunt Thrombosis in a Neonate With Protein C Deficiency**
Emin Tireli, MD, and Murat Basaran, MD

2261 **Lower Sternal Reinforcement to Improve Median Sternotomy Closure**
Julian E. Losanoff, MD, Bruce W. Richman, MA, and James W. Jones, MD, PhD

Reply
Uday K. Dasika, MD, and James A. Magovern, MD

2262 **Use of Autologous Arterial Patches for Tracheal Reconstruction in Young Infants**
Mark G. Hazekamp, MD, and Nic Nijdam, MD

Reply
Emmanuel Martinod, MD, Jacques F. Azorin, MD, and Alain F. Carpentier, MD, PhD

2263 **Ultrasonic Dissectors for Neurogenic Tumors of the Superior Sulcus**
Dominique Gossot, MD

Reply
François Pons, MD

2264 **Esophageal Perforations**
James W. Pate, MD

ANNOUNCEMENTS

A-28 **Information for Authors**

A-33 **Guidelines for Reviewers**

A-35 **Conditions for Publication Form**

A-37 **Events of Interest**

1959 **Internet Discussion Forum**

1977 **Requirements for Recertification/ Maintenance of Certification in 2005**

2003 **Notice From the American Board of Thoracic Surgery Regarding Trainees and Candidates for Certification Who Are Called to Military Service Related to the War on Terrorism**

2045 Notice from the American Board of Thoracic Surgery

2088 Southern Thoracic Surgical Association: Fifty-first Annual Meeting

2110 The Society of Thoracic Surgeons: Forty-first Annual Meeting

2121 Announcing Reduction in Cost of Color Illustrations Published in *The Annals*

2156 Inauguration of Electronic-Only Publication With July 2004 Issue

A-41 Information About Membership in The Society of Thoracic Surgeons

A-42 2005 Annual Meeting of The Society of Thoracic Surgeons, Call for Abstracts

A-43 Classified Advertisements

A-49 Index to Advertisers

INDEX TO VOLUME 77

2265 Author Index

2303 Subject Index